

**PHASE II ENVIRONMENTAL SITE
ASSESSMENT REPORT**

**TETERS FLORAL PROPERTY
912 SOUTH CHURCH AVENUE
LOUISVILLE, MISSISSIPPI
ACRES NO. 237224**

**CITY OF LOUISVILLE
2000 SOUTH CHURCH AVENUE
LOUISVILLE, MISSISSIPPI**

PPM PROJECT NO. 30065901-TO 15

NOVEMBER 16, 2018



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AT

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PREPARED FOR:

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1.0 INTRODUCTION

PPM Consultants, Inc. (PPM) was retained by the City of Louisville to conduct a Phase II Environmental Site Assessment (ESA) of the Teters Floral Property Site, located at 912 South Church Avenue in Louisville, Winston County, Mississippi. The purpose of the assessment was to evaluate whether soil and groundwater at the site contain regulated constituents of concern. The chemicals of potential concern are associated with the past use of the site for clock manufacturing, the current use of the site involving storage of unidentified materials in storage containers, and the underground storage tanks formerly used at the adjoining property to the west. This report describes field methodology, presents analytical results, and provides conclusions from the subsurface investigation of the site.

PPM identified the following recognized environmental conditions during the Phase I ESA completed July 2018:

- **Current uses of the property.** The site is primarily vacant warehouse space with some areas of the building being occupied by various organizations and businesses. The northern portion of the building is occupied by East Central Community College offices, a martial arts school, and the Prairie Opportunity community agency. Hewlett Manufacturing, which manufactures offshore oil filters and other products, conducts plastic molding in the northwestern portion of the building. Hewlett maintains machinery that performs the molding, shaping, and cutting processes used to manufacture their products. Some flammable liquids are stored within the building, but are kept in secured chemical cabinets. Three unlabeled 55-gallon drums and one 300-gallon tote were observed on the western portion of the property. Staining was observed both within and outside of the shallow containment basin the drums were located in. The presence of unidentified materials within these storage containers is a REC.
- **Historical uses of the property prior to current use.** Interviews and historical records indicate that the property was first developed in the early 1960s by the Spartus Clock Manufacturing Company, which operated at the property until 1996, when Spartus was acquired by General Time Corporation. Spartus manufactured clocks at the facility which included painting and plating operations. Spartus conducted metal plating operations prior to the advent of

regulations for storage, transportation, and disposal of hazardous materials. The potential for unrecorded release and/or onsite disposal of hazardous materials is a REC.

- **Woods Grocery.** The Woods Grocery is located adjacent to the west of the subject property. This facility operated with two 500-gallon gasoline USTs for approximately 13 years until the tanks were taken out of service and filled with an unknown material in 1988. The operation and closure in place of USTs on an adjacent property prior to state and federal regulations and without environmental testing represent a REC.

1.1 SCOPE OF WORK

Based on the findings of the Phase I ESA, PPM developed a Site-Specific Quality Assurance Project Plan (SSQAPP) that was presented to the City of Louisville, the Mississippi Department of Environmental Quality (MDEQ), and the Environmental Protection Agency (EPA) in July 2018. PPM conducted the Phase II ESA field work from October 8, 2018 through October 11, 2018 to evaluate surface and subsurface conditions at the facility. A total of nine soil borings were advanced at the site, and eight borings were converted to temporary wells. Selected soil and groundwater samples were submitted for laboratory analysis based upon conditions specific to that portion of the site. The following scope of work was completed for Phase II of the Teters Floral Property site:

- Contacted “One Call” to locate and mark underground utility lines at least three days prior to start of fieldwork;
- Prepared a Health and Safety Plan (HASP);
- Advanced nine soil borings (SB-1 through SB-9) to depths ranging from approximately 16 feet to 27 feet below ground surface (BGS), utilizing a direct push technology (DPT) drill rig;
- Collected soil samples from each of the soil borings for lithologic description, field screening, and laboratory analysis;
- Analyzed soil samples collected from soil borings SB-1 through SB-3, SB-5, and SB-7 through SB-9 for volatile organic compounds (VOCs), the eight Resource Conservation and Recovery (RCRA) heavy metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver), and cyanide. Laboratory analysis

of the soil sample collected from soil boring SB-4 for VOCs, RCRA heavy metals, cyanides, and semi-volatile organic compounds (SVOCs).

- Analyzed soil sample collected from soil boring SB-6 for polynuclear aromatic hydrocarbons (PAHs), benzene, toluene, ethylbenzene, and xylenes (BTEX), total petroleum hydrocarbons – diesel range organics (TPH-DRO), and/or TPH – gasoline range organics (TPH-GRO);
- Installed temporary monitoring wells in the eight soil borings (TW-1 through TW-8);
- Collected groundwater samples from the temporary wells;
- Analyzed groundwater samples for VOCs, RCRA heavy metals, SVOCs, cyanide, SVOVs, PAHs, BTEX, TPH-DRO, and/or TPH-GRO;
- Recorded the latitude and longitude of the soil boring locations; and
- Prepared this report presenting the scope of work, site background, investigative methodology, findings, and conclusions from the Phase II ESA field activities.

1.2 DEVIATIONS FROM THE APPROVED SCOPE OF WORK

There are no deviations from the Site-Specific Quality Assurance Project Plan (SSQAPP) approved by the MDEQ and EPA, except that a temporary well was not set in soil boring SB-9 and temporary well TW-7 was not sampled. Groundwater was encountered at shallower depths in soil borings located on the western portion. The DPT equipment was unable to advance past approximately 23 feet BGS at soil boring SB-7 due to expansive soils. Although saturated soils were not encountered, a temporary well (TW-7) was set in soil boring SB-7 in an attempt to collect a groundwater sample from that location. The temporary well TW-7 did not produce groundwater; therefore, a groundwater sample could not be collected. An attempt was made to advance soil boring SB-9 to further depths to determine if groundwater was present above 50 feet BGS. Due to the expansive soils, the DPT equipment could not advance past an approximate depth of 27 feet BGS in soil boring SB-9. Saturated soils were not encountered in soil boring SB-9, and a temporary well was not set in the boring.

2.0 SITE DESCRIPTION

2.1 SITE LOCATION AND SETTING

The Teters Floral Property site [Assessment, Cleanup, and Redevelopment Exchange System (ACRES) No. 237224] is located at 912 South Church Avenue in Louisville, Winston County, Mississippi 39339. The facility is located in Section 4, Township 14 North, Range 12 East of the Choctaw, Mississippi Meridian. More specifically, the site is located at 33° 06' 00.11" North latitude and 89° 03' 31.70" West longitude. Site location is depicted in **Figure 1, Site Location Map, Appendix A, Figures.**

The property is located south of downtown Louisville in a mixed use area that includes industrial, commercial, and residential properties. The surrounding properties currently consist of commercial properties to the west including an animal clinic, a storage facility, a construction material yard, and a convenience store. An industrial plywood facility is located to the northeast beyond Hughes Creek, and a multi-family residential property is located to the south. Historically, the surrounding land use consisted of residential and agricultural land until the early 1970s when developments in the vicinity of the subject property began to resemble what is present today. Surrounding properties are depicted in **Figure 2, Surrounding Area Map.**

The property is currently an approximately 400,000 square foot brick and metal building that houses multiple businesses and a large amount of vacant warehouse space. Occupants of the building include the East Central Community College/Louisville Career Advancement Center, the Prairie Opportunity Agency, a martial arts school, Hewlett Manufacturing, Super Grip tires, and Taylor Machine Works. Site features are included as **Figure 3, Site Map.**

2.2 GEOLOGY AND HYDROGEOLOGY

According to the *Geologic Map of Mississippi, 1985*, the site is located within the Wilcox Formation. The Mississippi Geological Survey describes the Wilcox Formation as irregularly bedded fine to coarse sand, more or less lignitic clay, and lignite; which includes bauxite bearing Fearn Springs Sand member at the base. The Wilcox Formation is underlain by the Naheola Formation which is described as fine to coarse micaceous sand, kaolin, and bauxitic clay. The *Mississippi State Geological Survey, Bulletin 52, Choctaw County Mineral Resources, 1943*, describes the Wilcox series as being comprised of two formations: the Holly Springs Formation, and the Ackerman Formation. The Holly Springs Formation is described as sand, sandstone, clay-shale, clay, silt, lignite,

silty limonite and siderite. The sand is normally coarse to fine, and commonly colored by iron oxide. The estimated maximum thickness of the Holly Springs Formation is 300 feet. The Ackerman Formation is described as sand, sandstone, clay-shale, clay, silt, lignite, and iron ore. The estimated maximum thickness of the Ackerman Formation is also 300 feet.

Groundwater within the Wilcox Formation is abundant within the first 100 feet of the subsurface. Domestic water wells were routinely installed to shallow depths within the first 100 feet to utilize the water source. Municipal water supply wells; however, were installed to greater depths in order to obtain groundwater from the Eutaw Formation, which are 1,600 to 1,800 feet BGS. In general, groundwater flow near the surface mimics the surface topography, and can vary in direction, as the region has numerous hills.

The Louisville South Quadrangle 7.5-Minute USGS topographic map (**Figure 1**) shows the property to have approximate elevation of 500 feet above mean sea level (AMSL).

2.3 AREA WATER WELLS

The MDEQ Office of Land and Water Resources was contacted to conduct a search of registered water wells within one-mile of the site. The MDEQ listed 11 wells within a 0.5 mile radius and north of the site. Registered descriptions of the uses of the wells are as follow: two wells listed as “abandoned;” one well listed as “other;” three wells listed as “unused,” and five wells listed as “public supply.” Depths of the wells range from 306 feet BGS to 2,725 feet BGS. The closest public supply well listed as K0035 is located approximately 600 feet north from the subject property and is approximately 310 feet BGS deep. A map showing the location of the wells and a supporting table provided by the MDEQ is included in **Appendix E, Area Water Well Information**.

3.0 FIELD ACTIVITIES

3.1 SOIL BORING ADVANCEMENT AND SOIL SAMPLING

On August 8, 2018 and August 9, 2018, PPM and its subcontractor advanced soil borings at the site using DPT. Soil borings SB-1 through SB-9 were advanced at the site based on potential environmental concerns identified during the Phase I ESA. Soil boring locations are depicted on **Figure 3, Site Map**. Exact locations of soil borings are listed on **Table 1, Soil Boring Latitude and Longitude Coordinates, Appendix C, Tables**.

- Five soil borings (SB-1 through SB-5) were installed along the outside edge of the western portion of the building to assess potential impact associated with the former metal plating operations. Soil boring SB-4 was also installed to assess potential impact from unlabeled drums and tote.
- One soil boring (SB-6) was installed on the western portion of the property to assess potential impact from the former UST site on the adjacent property to the west.
- Three soil borings (SB-7 through SB-9) were installed on the southeastern portion of the property to assess potential impact at downgradient locations associated with the former metal plating operations.

Soil borings were advanced using DPT and sampled at four foot intervals using macro-samplers with disposable liners. Soil samples were screened in the field by headspace analysis. Headspace analysis consisted of half-filling clean glass jars with soil and covering the jars with aluminum foil and lids. Vapors were allowed to equilibrate in each jar for approximately 15 minutes after being shaken for at least 15 seconds. A headspace reading was then obtained by inserting the probe tip of a photoionization detector (PID) through the aluminum foil. After each measurement, the instrument was allowed to return to background concentrations in the ambient air. Soil samples submitted for laboratory analysis were selected by the soil sample selection hierarchy based on: (1) the highest headspace result; (2) the observation of foreign material in the soil (e.g. staining or debris); or (3) the interval encountered above groundwater. Soil samples were placed in new, pre-cleaned, glass jars provided by the analytical laboratory and placed on ice prior to shipment to the laboratory. Soil descriptions were described based on visual inspection and professional judgement as described in *ASTM D2488-09A: Standard Practice for Description and Identification of Soils – Visual-Manual Procedure*.

3.2 TEMPORARY WELL INSTALLATION AND GROUNDWATER ELEVATION SURVEY

Temporary monitoring wells TW-1 through TW-8 were installed in borings SB-1 through SB-8, respectively. The temporary monitoring wells were constructed using 1-inch diameter polyvinyl chloride (PVC) casing with 0.01-inch machine slot screen. Wells were installed with 10 feet of screen. Well depths ranged from 16 feet BGS to 24 feet BGS. The water levels in the temporary monitoring wells were measured using an interface probe capable of detecting free-phase hydrocarbons (free product).

Top of casing elevations were obtained from the top of each of the installed temporary well casings using conventional survey equipment. Elevations are relative to site datum of 503.00 feet for the ground surface at the corner of the western portion of the building, which was estimated using Google Earth.

On August 10, 2018, a groundwater elevation survey was conducted. Depths to groundwater were measured using an oil/water interface probe capable of measuring the water depth to within +/- 0.01 feet. The interface probe was cleaned prior to use at each well location by means of a phosphate-free soap rinse, and a rinse of distilled water. Well casing elevations and groundwater depths were used to calculate groundwater elevations and flow direction. Groundwater elevations were used to generate a groundwater flow map and groundwater flow direction is illustrated in **Figure 6, Groundwater Elevation Map (October 10, 2018)**.

3.3 GROUNDWATER SAMPLING

Groundwater samples were collected from October 10, 2018 through October 11, 2018, using a peristaltic pump. Groundwater was purged using low-flow purging techniques until monitoring parameters were stabilized. An adequate purge was considered to be achieved when the pH and specific conductance of the groundwater was stabilized and the turbidity is either stabilized or is below 10 Nephelometric Turbidity Units (NTUs). Stabilization is described as when pH measurements remain constant within 0.1 Standard Unit (SU) and specific conductance varies no more than five percent. Groundwater was then collected in sampling containers and promptly placed on ice to await transport to the laboratory. Disposable nitrile gloves were worn during the sample collection and changed after each sample was collected.

Groundwater was not present in temporary well TW-7; therefore, a groundwater sample was not collected from temporary well TW-7.

3.4 LABORATORY ANALYSIS

Soil samples collected from SB-1 through SB-5 and SB-7 through SB-9 and groundwater samples collected from temporary wells TW-1 through TW-5 and TW-8 were analyzed for cyanide per EPA Method 9012B, RCRA Metals per EPA Method 6010B and 7471A, and VOCs per EPA Method 8260B. Samples collected from soil boring SB-4 and temporary well TW-4 were also analyzed for SVOCs per EPA Method 8270C. Samples collected from soil boring SB-6 and temporary well TW-6 were analyzed for BTEX per EPA Method 8260B, TPH-GRO and TPH-DRO by EPA Method 8015 Modified, and PAHs per

EPA Method 8270C-SIM. The soil and groundwater samples collected from the soil borings and temporary wells were analyzed by Pace Analytical, Inc., of Mount Juliet, Tennessee.

4.0 RESULTS

4.1 SITE GEOLOGY AND GROUNDWATER CONDITIONS

Nine soil borings were advanced on the Teters Floral Property site. Borings were advanced to depths of approximately 16 to 27 feet BGS using DPT. In majority of the soil borings, the near surface soils were overlain by topsoil or concrete. The topsoil ranged in thickness from two inches to 4 inches, and the concrete where present was approximately three inches thick. Soils observed during soil boring advancement on the western portion of the site were different from the soils encountered on the eastern portion of the site.

In the borings SB-1 through SB-6 on the western portion of the site, sandy silts, silts, sandy clays, and/or clays were observed as the near surface soils. The near surface clays and silts are described as low to moderate in plasticity, soft or firm, homogeneous, slightly moist to moist, and ranged in variations of browns, tans, and grays in color. The silts and clays extended to approximate depths ranging from 14 feet BGS to 18 feet BGS. Highly plastic clay was observed between the low plasticity clay layers in soil boring SB-6 from approximately 6 feet BGS to 12 feet BGS. This highly plastic clay was firm, mottled, slightly moist, and gray, tan, and orange in color. The silts and clays were underlain by silty sand or clayey sand. The sands were described as poorly graded, fine grain, very moist to saturated, and gray. The sand layers were approximately two feet in thickness. The sands were underlain by silts or sandy clays that extended past boring depth terminations. The silt and sandy clays were described as low plasticity, firm, homogeneous, slightly moist, and gray in color.

In the borings SB-7 through SB-9 on the eastern portion of the site, the near surface soils consisted of silty clays and clays. The silty clays and clays were described as low to moderate plasticity, firm, homogeneous or mottled, dry, and brown, gray, and/or tan in color. The sand content increased with deeper depths, and sandy clays and sandy silts were underlain the silty clays and clays at approximate contact depths ranging from 10 feet BGS to 20 feet BGS. The sandy clays and sandy silts are described as low plasticity, soft, homogeneous, moist, and gray and brown. The sandy clays and sandy silts were underlain by clayey sands at approximate depths ranging from 17 feet BGS to 22 feet BGS. The

clayey sands were described as poorly graded, fine grain, moist to wet, and gray and/or brown in color. The clayey sands extended to approximate depths of 22 feet BGS to 23 feet BGS. In soil boring SB-7, a clay layer was observed between the sandy silt and clayey sand. This clay was moderately plastic, firm, mottled, tan, black, and orange. The clayey sands were underlain by clays that extended past boring terminations. The clay at boring termination in soil boring SB-7 was described a low plasticity, friable, homogeneous, dry, and black. The clays at boring termination in soil borings SB-8 and SB-9 were described as low plasticity, hard to firm, mottled, slightly moist, reddish brown, tan, black, and/or gray.

Saturated soils, where encountered, were observed at depths ranging approximately 12 feet BGS to 16 feet BGS. Detailed descriptions of the lithology encountered during this investigation are included in the boring logs presented in **Appendix B, Geologic Boring Logs**.

Static water levels in the eight temporary wells were measured on October 10, 2018. Free product was not observed. Groundwater elevations calculated in temporary wells TW-1 through TW-6 and TW-8 ranged from 488.25 feet (MSL) in TW-8 to 498.26 feet (MSL) in TW-3. A groundwater elevation map was prepared using the collected data and is depicted in **Figure 6, Groundwater Flow Map (October 10, 2018)**. Based on the data, groundwater beneath the site appears to flow eastward. The groundwater elevation data is summarized in **Table 4, Groundwater Elevation Survey Data**.

4.2 SOIL ANALYTICAL RESULTS

Headspace analysis (field screening) of the collected soil samples was conducted using a PID during soil sampling activities. Headspace concentrations ranged from 0.0 parts per million (ppm) at multiple locations to 3,074 ppm. The highest headspace reading of 3,074 ppm was detected in the sample from boring SB-2, 0 feet BGS to 4 feet BGS. Field screening results are summarized in **Table 2, Soil Boring Headspace Summary, Appendix C, Tables**.

A grab sample was collected from each 4-foot interval of the soil boring. One sample from each boring was selected for lab analysis from the interval exhibiting the highest headspace concentration or believed to be the most likely impacted area. The following soil samples from each boring were submitted for laboratory analysis: SB-1 (0 feet to 4 feet); SB-2 (0 feet to 4 feet); SB-3 (0 feet to 4 feet); SB-4 (8 feet to 10 feet); SB-5 (4 feet to 8 feet);

SB-6 (8 feet to 12 feet); SB-7 (0 feet to 4 feet); SB-8 (0 feet to 4 feet); and SB-9 (0 feet to 4 feet).

The VOCs acetone, 1,1-dichloroethane, cis-1,2-dichloroethene, trans-1,3-dichloropropene, ethylbenzene, isopropylbenzene, n-propylbenzene, trichloroethene 1,2,4-trimethylbenzene, 1,2,3-trimethylbenzene, 1,3,5-trimethylbenzene, vinyl chloride, and total xylenes were detected in the collected soil samples. The VOCs were detected at concentrations below their MDEQ Unrestricted TRGs.

TPH-DRO was detected in the soil boring collected from SB-6 (4.10 mg/kg) at a concentration below the MDEQ Unrestricted TRG of 300 mg/kg.

TPH-GRO was detected in the soil boring collected from SB-6 (6.98 mg/kg) at a concentration below the MDEQ Unrestricted TRG of 200 mg/kg.

The RCRA metals arsenic, barium, chromium, lead, and mercury were detected in the soil samples collected. Detected barium, chromium, lead, and mercury concentrations were below each of their MDEQ Unrestricted TRGs. The following arsenic concentrations were above the MDEQ Tier 1 Unrestricted TRG of 0.426 mg/kg:

Well I.D.	Arsenic (mg/kg)
SB-2	2.09
SB-4	3.11
SB-5	3.24
SB-7	2.74
SB-9	4.08

The arsenic concentration detected in the soil sample collected from soil boring SB-9 (4.08 mg/kg) is above the MDEQ Tier 1 Restricted TRG of 3.82 mg/kg.

According to the *Geochemical and Mineralogical Maps for Soils of the Conterminous United States* published by the U.S. Geological Survey in 2014, background levels for soils in the project area range from 3.9 mg/kg to 7.8 mg/kg. The detected concentrations are, therefore, considered to be consistent with background levels in the area.

The TRGs are found in the Tier 1 Target Remedial Goal Table of the Final Regulations Governing Brownfields Voluntary Cleanup and Redevelopment in Mississippi, published by the Mississippi Commission on Environmental Quality and adopted May 1999 and revised March 2002. The Final Regulations Governing Brownfields Voluntary Cleanup and Redevelopment in Mississippi states that sites with constituent' concentrations above the Tier 1 Unrestricted TRG, but below the Tier 1 Restricted TRG can be a restricted land use site upon MDEQ approval.

Detected concentrations of analyzed constituents are depicted on **Figure 4, Detected Metals in Soil (October 8-9, 2018)** and **Figure 5, Detected VOCs, TPH-GRO, and TPH-DRO in Soil (October 8-9, 2018)** and are summarized in **Table 3A, Summary of Soil Analytical Results – Detected Metals, TPH-GRO, and TPH-DRO Constituents** and **Table 3B, Summary of Soil Analytical Results – Detected VOCs Constituents**.

4.3 GROUNDWATER ANALYTICAL RESULTS

Groundwater samples from the temporary wells TW-1 through TW-6 and TW-8 were submitted for laboratory analysis. VOCs and RCRA metals were detected in groundwater samples collected from the temporary wells.

VOCs detected in the groundwater samples collected from the site include the following: n-butylbenzene; 1,1-dichloroethane; cis-1,2-dichloroethene; trans-1,2-dichloroethene; ethylbenzene; isopropylbenzene; p-isopropylbenzene; naphthalene; n-propylbenzene; tetrachloroethene; toluene, trichloroethene; 1,2,4-trimethylbenzene; 1,2,3-trimethylbenzene; 1,3,5-trimethylbenzene; vinyl chloride; and xylenes. The detected VOCs n-butylbenzene, sec-butylbenzene, 1,1-dichloroethane, trans-1,2-dichloroethene, ethylbenzene, isopropylbenzene, naphthalene, n-propylbenzene, toluene, and xylene concentrations were below each of their MDEQ Tier 1 TRGs. MDEQ Tier 1 TRGs are not available for the VOCs p-isopropylbenzene and 1,2,3-trimethylbenzene.

Detected cis-1,2-dichloroethene concentrations in the collected groundwater samples ranged from 38.6 µg/L to 342 µg/L. The cis-1,2-dichloroethene concentrations detected in the groundwater samples collected from temporary wells TW-2 (342 µg/L) and TW-8 (86.0 µg/L) were above the MDEQ Tier 1 TRG of 70 µg/L.

The detected tetrachloroethene concentrations in the groundwater samples collected from TW-2 (552 µg/L) and TW-8 (49.8 µg/L) were above the MDEQ Tier 1 TRG of 5 µg/L.

Detected trichloroethene concentrations in the collected groundwater samples ranged from 3.08 µg/L to 110 µg/L. The trichloroethene concentrations detected in the groundwater samples collected from temporary wells TW-2 (60.4 µg/L), TW-5 (16.2 µg/L), and TW-8 (110 µg/L) were above the MDEQ Tier 1 TRG of 5 µg/L.

1,2,4-Trimethylbenzene was detected in groundwater samples collected from temporary wells TW-2 (1,000 µg/L) and TW-3 (11.9 µg/L). The 1,2,4-trimethylbenzene concentration of 1,000 µg/L detected in the temporary well TW-2 was above the MDEQ Tier 1 TRG of 12.3 µg/L.

1,3,5-Trimethylbenzene was detected in groundwater samples collected from temporary wells TW-2 (270 µg/L) and TW-3 (3.30 µg/L). The 1,3,5-trimethylbenzene concentration of 270 µg/L detected in the temporary well TW-2 was above the MDEQ Tier 1 TRG of 12.3 µg/L.

Detected vinyl chloride concentrations in the collected groundwater samples ranged from 1.26 µg/L to 66.4 µg/L. The vinyl chloride concentrations detected in the groundwater samples collected from temporary wells TW-4 (66.4 µg/L) and TW-5 (41.0 µg/L) were above the MDEQ Tier 1 TRG of 2 µg/L.

RCRA metals barium and lead were detected in groundwater samples collected from the site. The detected RCRA metals concentrations were below the MDEQ Tier 1 TRGs.

Groundwater analytical results are summarized in **Table 5, Summary of Groundwater Analytical Results – Detected Constituents** and depicted in **Figure 7, Detected Metals in Groundwater (October 10-11, 2018)** and **Detected VOCs in Groundwater (October 10-11, 2018)**. The laboratory analytical report is included in **Appendix D, Laboratory Analytical Report**.

4.4 QUALITY ASSURANCE/QUALITY CONTROL

QA/QC samples included one sampling equipment rinsate sample collected for every ten soil samples collected and every ten groundwater samples collected. Additionally, one field blank was collected per day, and one trip blank was included with each cooler shipped to the laboratory. QA/QC samples were analyzed for VOCs per EPA Method 8260B. VOCs were not detected in the rinsates, trip blanks, or field blanks collected during field activities. The soil duplicate was collected from soil boring SB-4. Two of the three VOCs detected in the soil boring were also detected in the duplicate. The

concentrations detected in SB-4 and the duplicate were relatively low concentrations. The groundwater duplicate was collected from temporary well TW-2. The VOCs detected in the groundwater duplicate and sample collected from temporary well TW-2 have an average 9.93 relative percent difference (RPD). Laboratory results are included in **Appendix D, Laboratory Analytical Reports**.

5.0 FINDINGS AND CONCLUSIONS

The findings of this assessment are summarized as follows:

- Soil beneath the western portion of the site consists of sandy silts, silts, sandy clays, and/or clays underlain by silty or clayey sands. The sands were underlain by sandy clays.
- Soil beneath the eastern portion of the site consists of silty clays and clays underlain by sandy clays or sandy silts. The sandy clays and sandy silts were underlain by clayey sand layers. Clays were under the sandy clay layers and extended to boring terminations.
- Groundwater elevations measured at the temporary wells ranged from 488.25 feet (TW-8) to 498.26 feet (TW-3). Based on the potentiometric surface map, groundwater beneath the site appear to move eastward.
- VOCs, TPH-GRO, and TPH-DRO were detected in soil samples at concentrations below their MDEQ Tier 1 Unrestricted TRGs.
- The RCRA metals barium, chromium, lead, and mercury were detected in the soil samples at concentrations below their MDEQ Tier 1 Unrestricted TRGs.
- Arsenic concentrations exceeded MDEQ Tier 1 Unrestricted TRG in the soil samples collected from the soil borings SB-2, SB-4, SB-5, SB-7, and SB-9. The arsenic concentration detected in soil sample collected from soil boring SB-9 (4.08 $\mu\text{g/L}$) was above the MDEQ Tier 1 Restricted TRG. The concentrations detected in soil borings are considered to be consistent with background levels in the subject area.
- RCRA metals barium and lead were detected in the groundwater samples at concentrations below their MDEQ Tier 1 TRGs.

- Cis-1,2-dichloroethene was detected in the groundwater samples collected from temporary wells TW-2 (342 µg/L) and TW-8 (86.0 µg/L) at concentrations above the MDEQ Tier 1 TRG of 70 µg/L.
- Tetrachloroethene was detected in groundwater samples collected from temporary wells TW-2 (552 µg/L) and TW-8 (49.8 µg/L) at concentrations above the MDEQ Tier 1 TRG of 5 µg/L.
- Trichloroethene was detected in the groundwater samples collected from the temporary wells TW-2 (60.4 µg/L), TW-5 (16.2 µg/L), and TW-8 (110 µg/L) at concentrations above the MDEQ Tier 1 TRG of 5 µg/L.
- 1,2,4-Trimethylbenzene was detected in the groundwater sample collected from temporary well TW-2 (1,000 µg/L) at a concentrations above the MDEQ Tier 1 TRG of 12.3 µg/L.
- 1,3,5-Trimethylbenzene was detected in groundwater sample collected from temporary well TW-2 (270 µg/L) at a concentration above the MDEQ Tier 1 TRG of 12.3 µg/L.
- Vinyl chloride was detected in the groundwater samples collected from temporary wells TW-4 (66.4 µg/L) and TW-5 (41.0 µg/L) at concentrations above the MDEQ Tier 1 TRG of 2 µg/L.

The following conclusions are based on, or are reasonably ascertainable from, published information, field observations, and the results of specific laboratory analyses:

- Based on the findings of this assessment, the former UST site (Woods Grocery) located on the adjacent property to the west of the subject property is located upgradient from the subject property. The soil boring/temporary well, SB-6/TW-6, was installed to intersect groundwater downgradient of the Woods Grocery site. The analytical results of the soil and groundwater samples indicate concentrations of BTEX, TPH-GRO, TPH-DRO, and PAHs were not detected at concentrations above the MDEQ Tier 1 TRGs. Therefore, petroleum hydrocarbon fuel constituents are not migrating onto the subject property from Woods Grocery, and the associated REC from the Phase I ESA is not substantiated.
- Elevated concentrations of tetrachloroethene (PCE) and its degradation products, trichloroethene (TCE), cis-1,2-dichloroethene, and vinyl chloride are present in the groundwater on the western portion of the site and downgradient on the eastern portion of the site. The source of PCE, TCE, and their degradation products are commonly related to the use of solvents and degreasers. Elevated concentrations of

1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene were also detected in the groundwater collected from the temporary well TW-2 on the western portion of the site. The constituents are typically associated with degraded petroleum fuel and hydrocarbon solvents. The detected concentration of VOCs in the western portion of the site appears to be related to past site operations. Therefore, the REC from the Phase I ESA for the past use of the site for manufacturing clocks is substantiated.

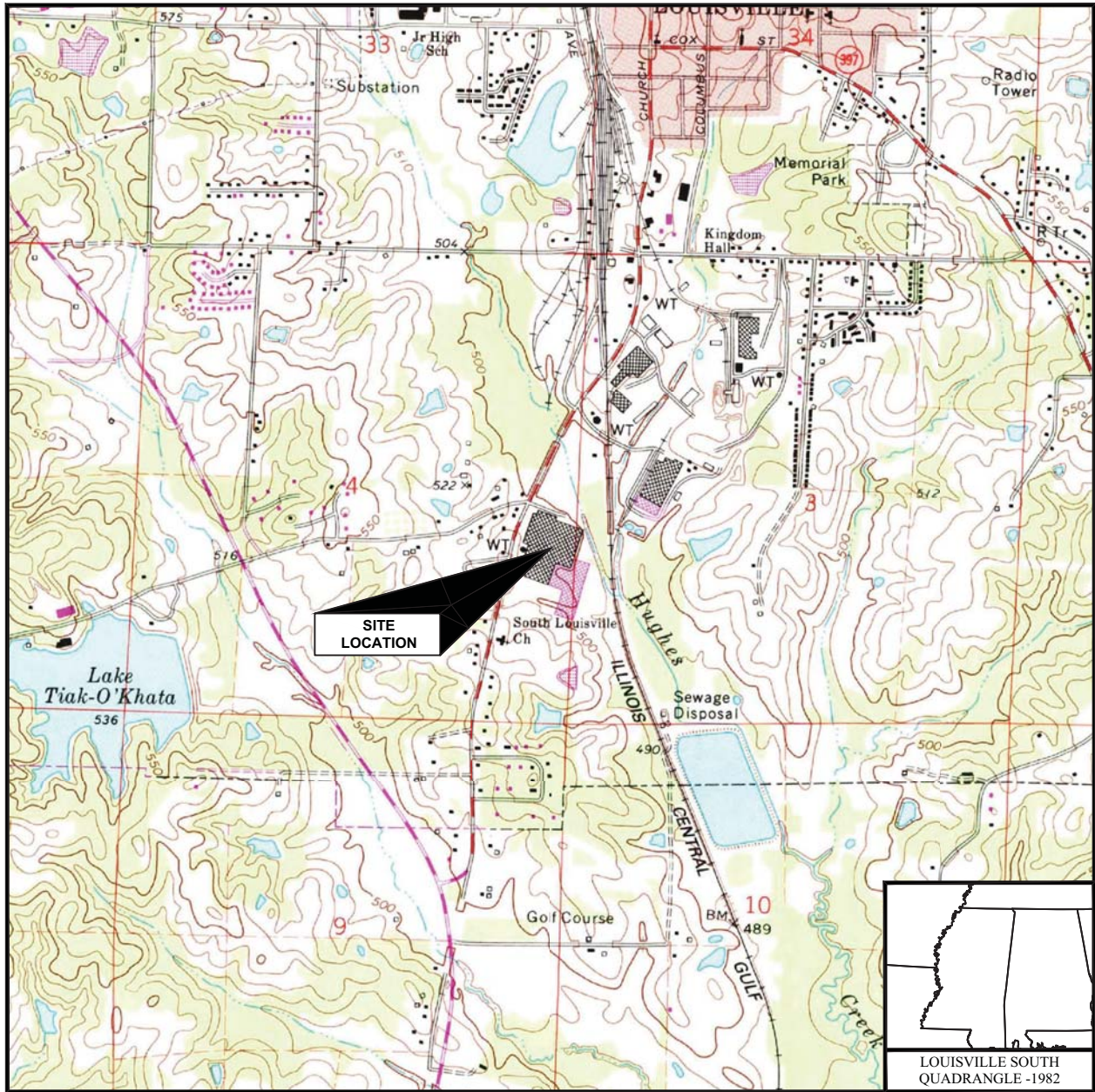
- The 55-gallon drums and 300-gallon tote contain unidentified materials and pose a material threat of future release; therefore, the presence of the drums and tote is still considered to represent a REC.

6.0 RECOMMENDATIONS

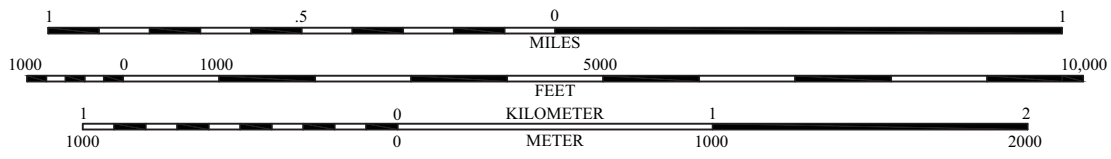
Based on the findings and conclusions of this assessment, PPM recommends further assessment to confirm the findings of the Phase II ESA and to evaluate whether offsite migration is likely. PPM also recommends that the 55-gallon drums and 300-gallon tote be profiled and disposed off-site to mitigate potential impacts from a future release.


APPENDICES

APPENDIX A – FIGURES



SCALE: 1 : 24,000

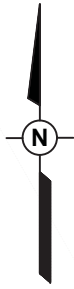


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PROJECT NUMBER: 30065901	BILLING GROUP: TO 15

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TETERS FLORAL PROPERTY
 912 SOUTH CHURCH STREET
 LOUISVILLE, MISSISSIPPI

SITE LOCATION MAP

FIGURE
 NUMBER
1



0 250 500

SCALE: 1"=500'
(Approximate)



SOURCE: GOOGLE EARTH

I.D.	DESCRIPTION
1	LOUISVILLE ELECTRIC AND WATER
2	WINSTON PLYWOOD AND VENEER
3	CHURCH
4	RESIDENTIAL
5	STORAGE UNITS
6	ANIMAL CLINIC
7	DIRT AND GRAVEL STORAGE
8	VACANT
9	WOODS GROCERY

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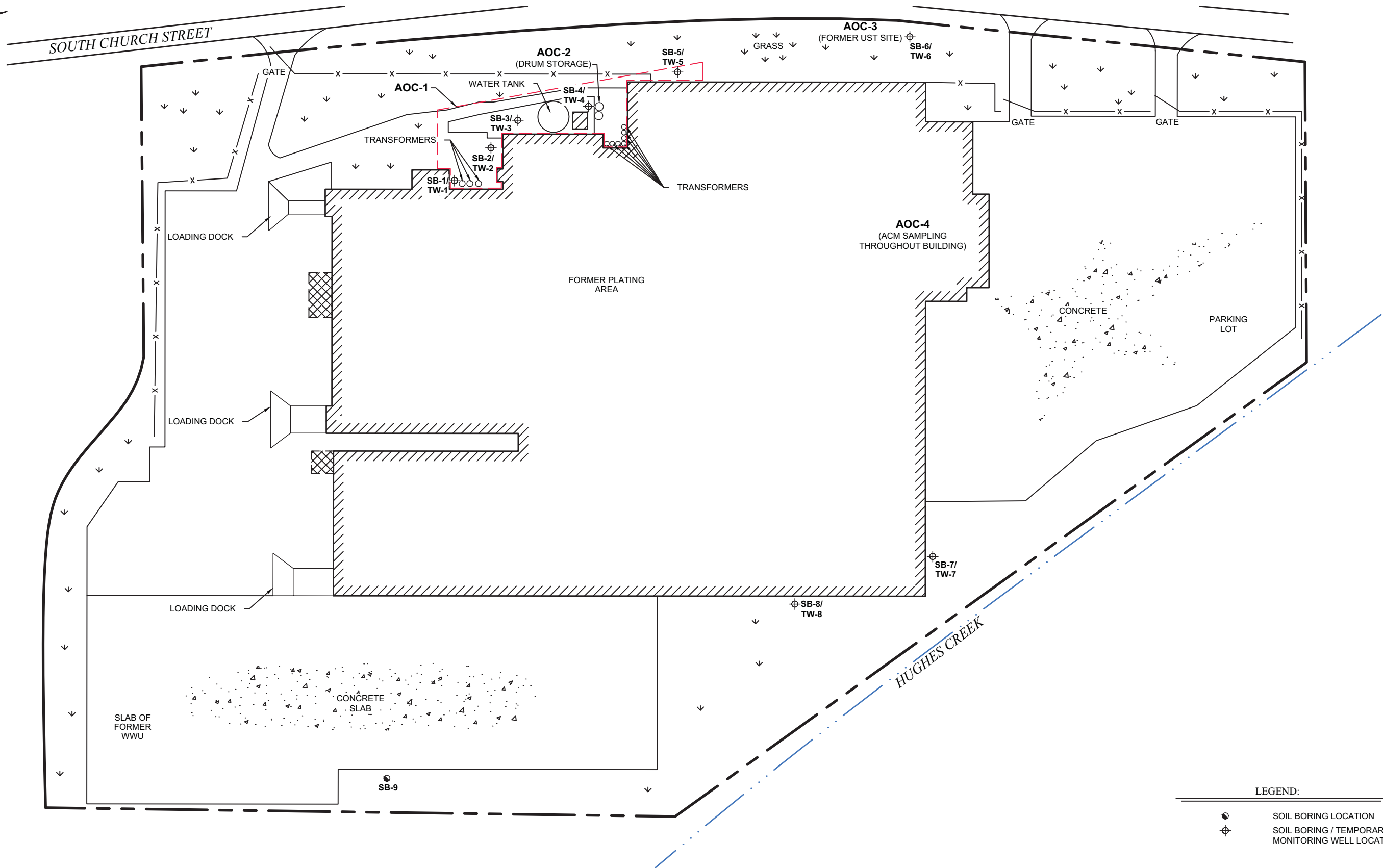
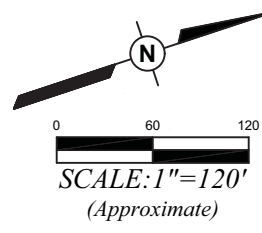
DRAWN BY: JCP	DRAWN DATE: 11/12/18
PROJECT NUMBER: 30065901	BILLING GROUP: TO 15

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SURROUNDING AREA MAP

FIGURE
NUMBER

2

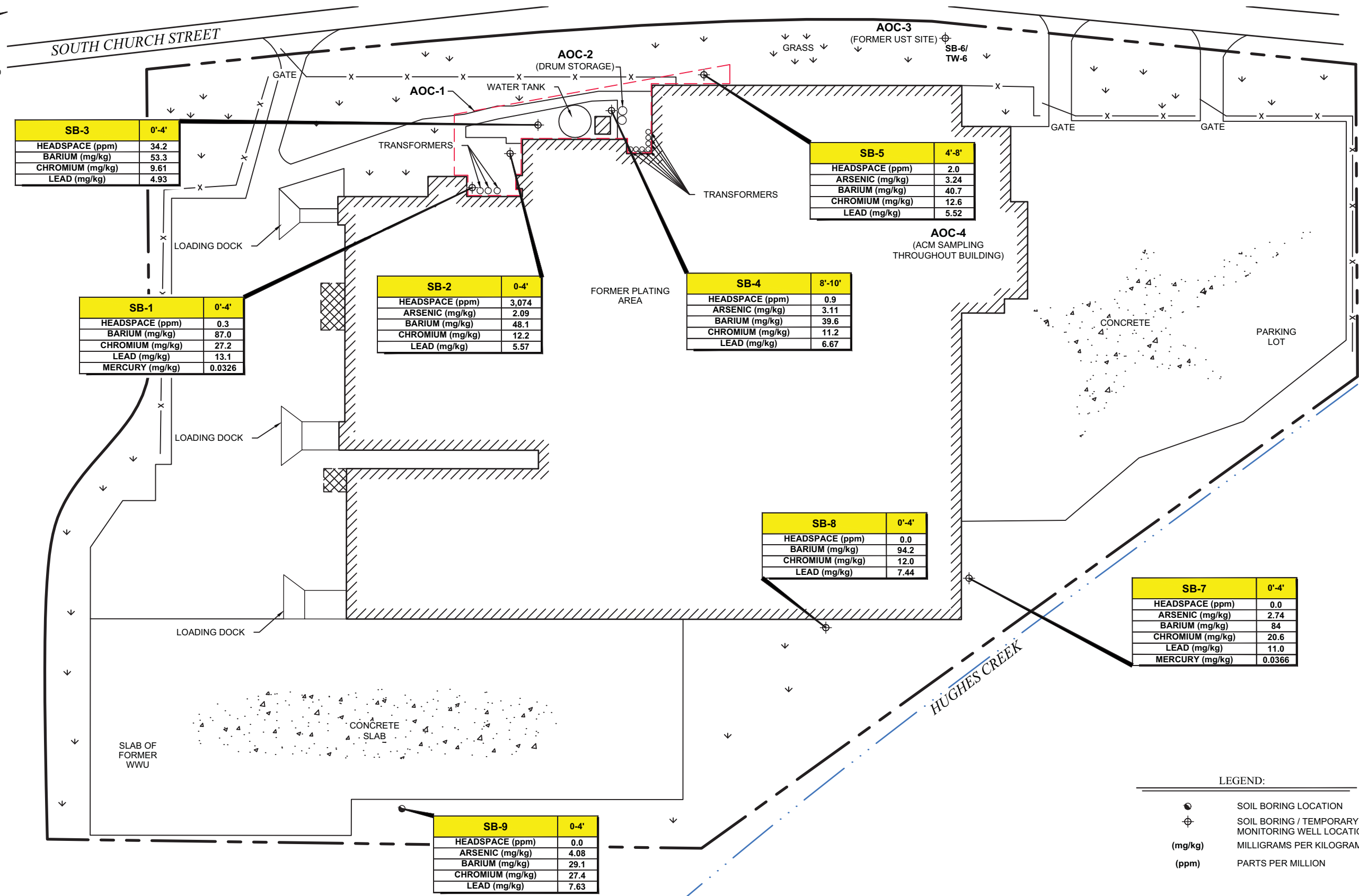
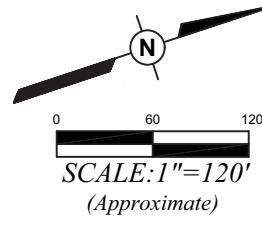


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SITE MAP

FIGURE
NUMBER
3



SB-3	0'-4'
HEADSPACE (ppm)	34.2
BARIUM (mg/kg)	53.3
CHROMIUM (mg/kg)	9.61
LEAD (mg/kg)	4.93

SB-1	0'-4'
HEADSPACE (ppm)	0.3
BARIUM (mg/kg)	87.0
CHROMIUM (mg/kg)	27.2
LEAD (mg/kg)	13.1
MERCURY (mg/kg)	0.0326

SB-2	0-4'
HEADSPACE (ppm)	3,074
ARSENIC (mg/kg)	2.09
BARIUM (mg/kg)	48.1
CHROMIUM (mg/kg)	12.2
LEAD (mg/kg)	5.57

SB-4	8'-10'
HEADSPACE (ppm)	0.9
ARSENIC (mg/kg)	3.11
BARIUM (mg/kg)	39.6
CHROMIUM (mg/kg)	11.2
LEAD (mg/kg)	6.67

SB-5	4'-8'
HEADSPACE (ppm)	2.0
ARSENIC (mg/kg)	3.24
BARIUM (mg/kg)	40.7
CHROMIUM (mg/kg)	12.6
LEAD (mg/kg)	5.52

SB-8	0'-4'
HEADSPACE (ppm)	0.0
BARIUM (mg/kg)	94.2
CHROMIUM (mg/kg)	12.0
LEAD (mg/kg)	7.44

SB-7	0'-4'
HEADSPACE (ppm)	0.0
ARSENIC (mg/kg)	2.74
BARIUM (mg/kg)	84
CHROMIUM (mg/kg)	20.6
LEAD (mg/kg)	11.0
MERCURY (mg/kg)	0.0366

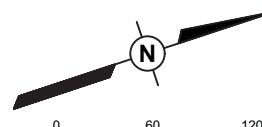
SB-9	0-4'
HEADSPACE (ppm)	0.0
ARSENIC (mg/kg)	4.08
BARIUM (mg/kg)	29.1
CHROMIUM (mg/kg)	27.4
LEAD (mg/kg)	7.63

- LEGEND:
- SOIL BORING LOCATION
 - SOIL BORING / TEMPORARY MONITORING WELL LOCATION
 - (mg/kg) MILLIGRAMS PER KILOGRAM
 - (ppm) PARTS PER MILLION

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CITY OF LOUISVILLE
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912 SOUTH CHURCH STREET
LOUISVILLE, MISSISSIPPI

DETECTED METALS IN SOIL
(OCTOBER 8-9, 2018)



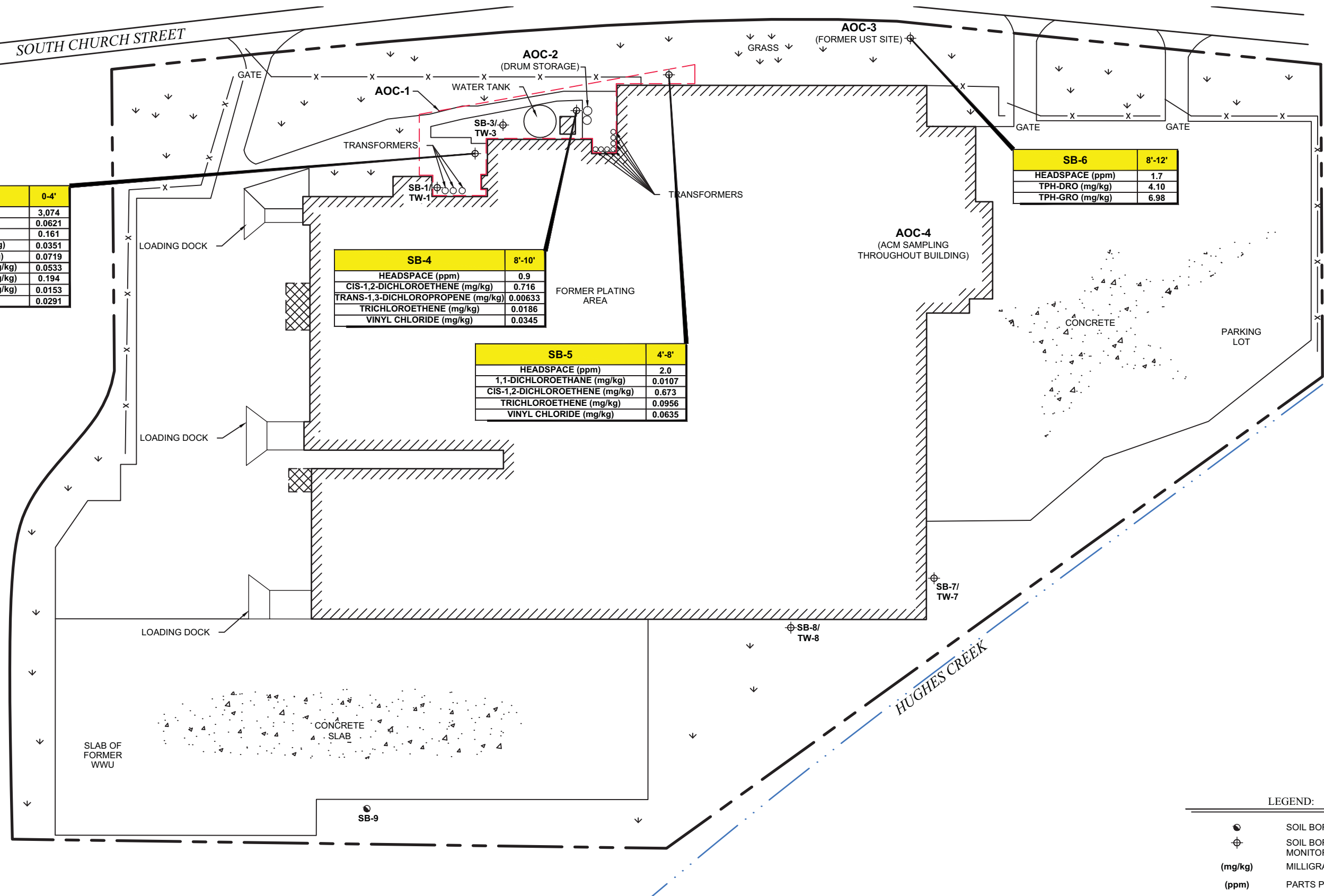
0 60 120
 SCALE: 1"=120'
 (Approximate)

SB-2		0-4'
HEADSPACE (ppm)		3.074
ACETONE (mg/kg)		0.0621
ETHYLBENZENE (mg/kg)		0.161
ISOPROPYLBENZENE (mg/kg)		0.0351
N-PROPYLBENZENE (mg/kg)		0.0719
1,2,4-TRIMETHYLBENZENE (mg/kg)		0.0533
1,2,3-TRIMETHYLBENZENE (mg/kg)		0.194
1,3,5-TRIMETHYLBENZENE (mg/kg)		0.0153
TOTAL XYLENES (mg/kg)		0.0291

SB-4		8'-10'
HEADSPACE (ppm)		0.9
CIS-1,2-DICHLOROETHENE (mg/kg)		0.716
TRANS-1,3-DICHLOROPROPENE (mg/kg)		0.00633
TRICHLOROETHENE (mg/kg)		0.0186
VINYL CHLORIDE (mg/kg)		0.0345

SB-5		4'-8'
HEADSPACE (ppm)		2.0
1,1-DICHLOROETHANE (mg/kg)		0.0107
CIS-1,2-DICHLOROETHENE (mg/kg)		0.673
TRICHLOROETHENE (mg/kg)		0.0956
VINYL CHLORIDE (mg/kg)		0.0635

SB-6		8'-12'
HEADSPACE (ppm)		1.7
TPH-DRO (mg/kg)		4.10
TPH-GRO (mg/kg)		6.98



LEGEND:

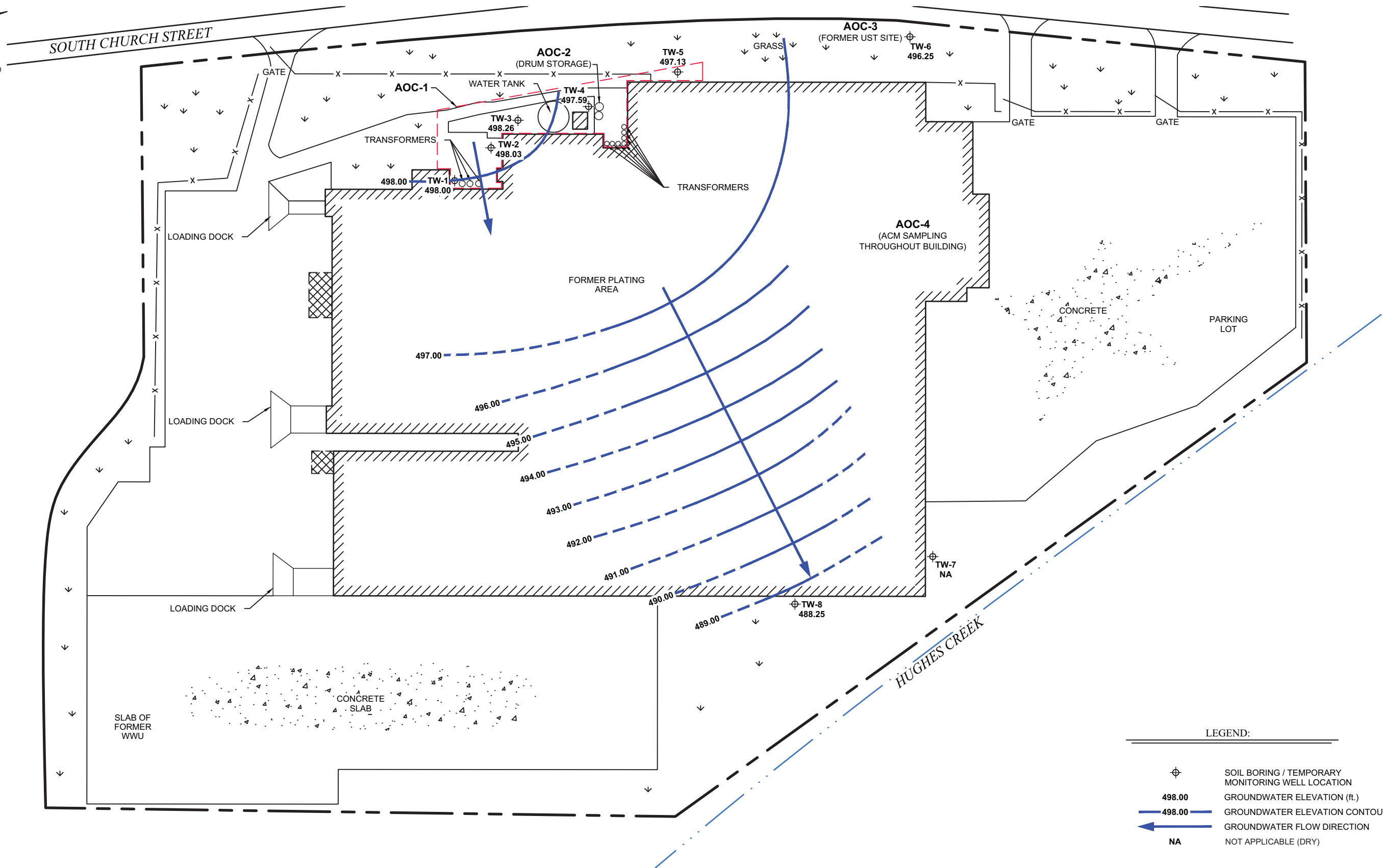
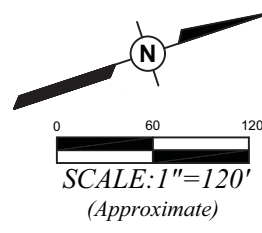
- SOIL BORING LOCATION
- SOIL BORING / TEMPORARY MONITORING WELL LOCATION
- (mg/kg)** MILLIGRAMS PER KILOGRAM
- (ppm)** PARTS PER MILLION

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DETECTED VOCs, TPH-GRO, AND TPH-DRO IN SOIL
 (OCTOBER 8-9, 2018)

FIGURE NUMBER
5



LEGEND:

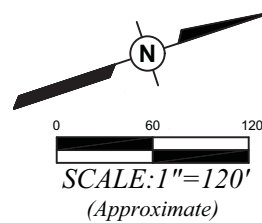
⊕	SOIL BORING / TEMPORARY MONITORING WELL LOCATION
498.00	GROUNDWATER ELEVATION (ft.)
— 498.00 —	GROUNDWATER ELEVATION CONTOUR (ft.)
←	GROUNDWATER FLOW DIRECTION
NA	NOT APPLICABLE (DRY)

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 912 SOUTH CHURCH STREET
 LOUISVILLE, MISSISSIPPI

GROUNDWATER ELEVATION MAP
 (OCTOBER 11, 2018)

FIGURE NUMBER
6



TW-3	
BARIUM (µg/L)	101

TW-1	
BARIUM (µg/L)	147

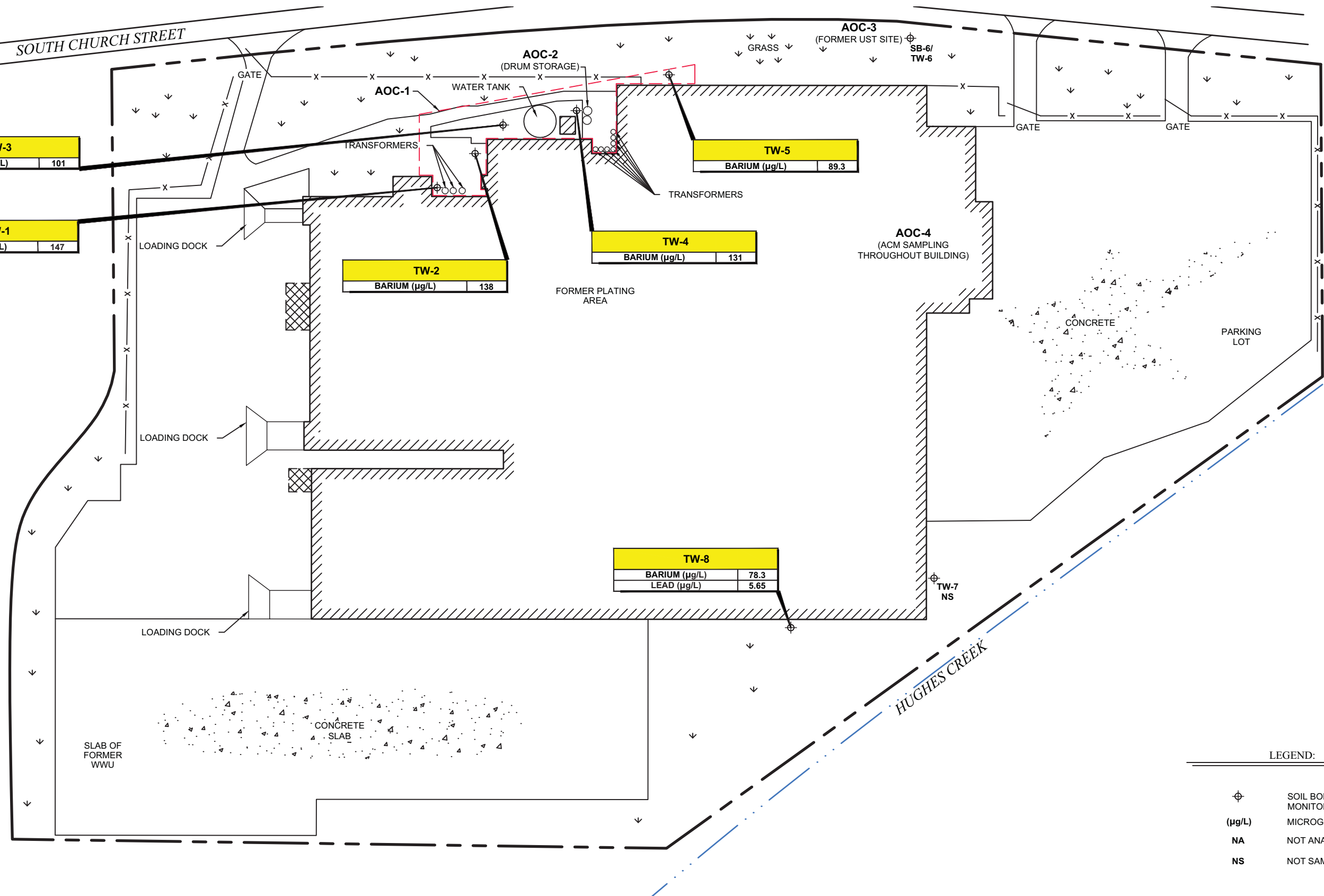
TW-2	
BARIUM (µg/L)	138

TW-4	
BARIUM (µg/L)	131

TW-5	
BARIUM (µg/L)	89.3

TW-8	
BARIUM (µg/L)	78.3
LEAD (µg/L)	5.65

TW-7
NS



LEGEND:

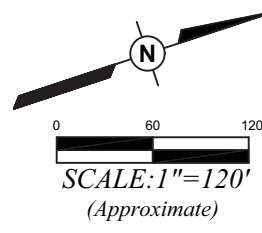
⊕	SOIL BORING / TEMPORARY MONITORING WELL LOCATION
(µg/L)	MICROGRAMS PER LITER
NA	NOT ANALYZED (DRY)
NS	NOT SAMPLED

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CITY OF LOUISVILLE
TETERS FLORAL PROPERTY
912 SOUTH CHURCH STREET
LOUISVILLE, MISSISSIPPI

DETECTED METALS IN GROUNDWATER
(OCTOBER 10-11, 2018)

FIGURE NUMBER
7



SOUTH CHURCH STREET

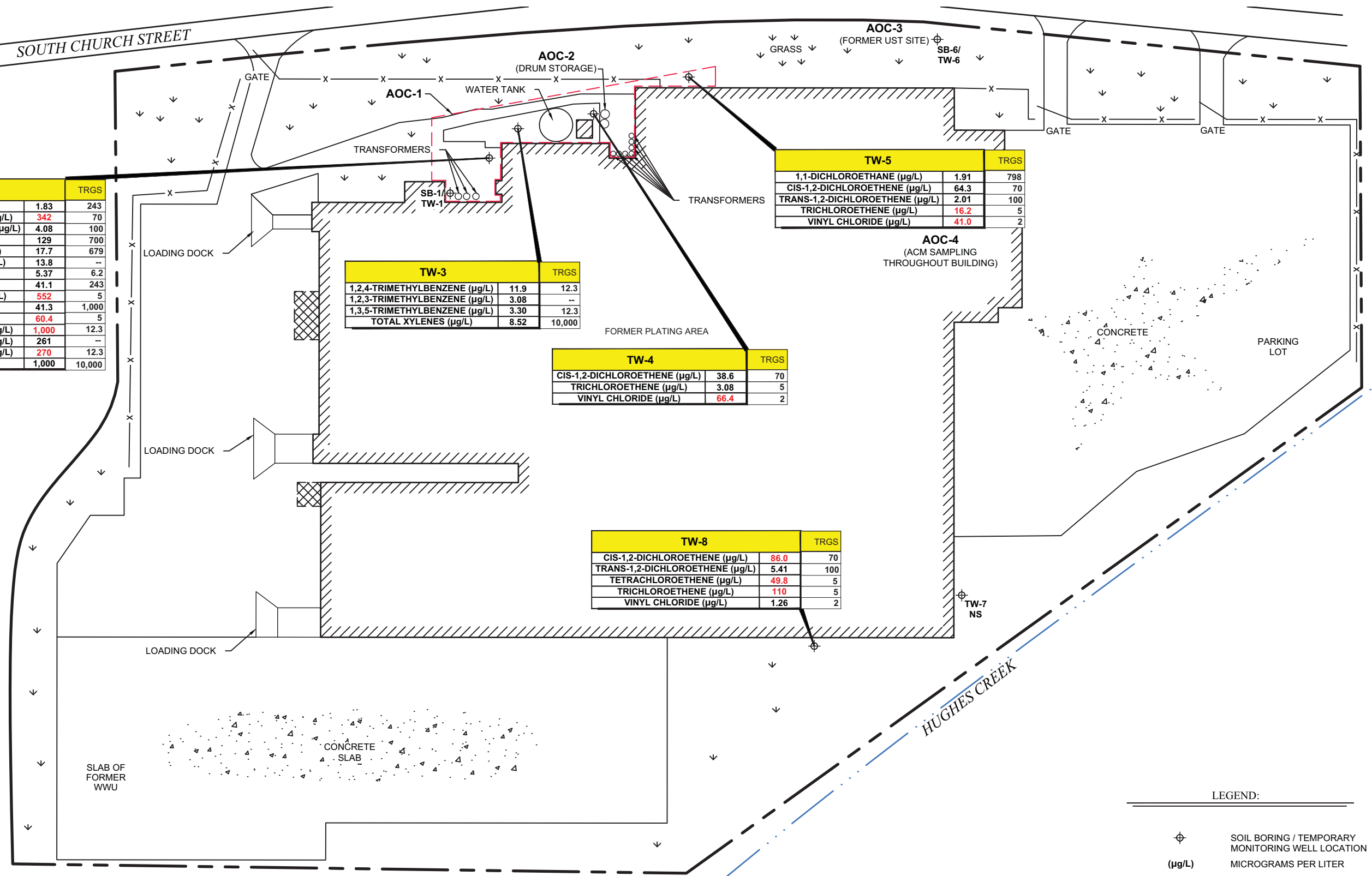
TW-2		TRGS
N-BUTYLBENZENE (µg/L)	1.83	243
CIS-1,2-DICHLOROETHENE (µg/L)	342	70
TRANS-1,2-DICHLOROETHENE (µg/L)	4.08	100
ETHYLBENZENE (µg/L)	129	700
ISOPROPYLBENZENE (µg/L)	17.7	679
P-ISOPROPYLBENZENE (µg/L)	13.8	--
NAPHTHALENE (µg/L)	5.37	6.2
N-PROPYLBENZENE (µg/L)	41.1	243
TETRACHLOROETHENE (µg/L)	552	5
TOLUENE (µg/L)	41.3	1,000
TRICHLOROETHENE (µg/L)	60.4	5
1,2,4-TRIMETHYLBENZENE (µg/L)	1,000	12.3
1,2,3-TRIMETHYLBENZENE (µg/L)	261	--
1,3,5-TRIMETHYLBENZENE (µg/L)	270	12.3
TOTAL XYLENES (µg/L)	1,000	10,000

TW-3		TRGS
1,2,4-TRIMETHYLBENZENE (µg/L)	11.9	12.3
1,2,3-TRIMETHYLBENZENE (µg/L)	3.08	--
1,3,5-TRIMETHYLBENZENE (µg/L)	3.30	12.3
TOTAL XYLENES (µg/L)	8.52	10,000

TW-4		TRGS
CIS-1,2-DICHLOROETHENE (µg/L)	38.6	70
TRICHLOROETHENE (µg/L)	3.08	5
VINYL CHLORIDE (µg/L)	66.4	2

TW-8		TRGS
CIS-1,2-DICHLOROETHENE (µg/L)	86.0	70
TRANS-1,2-DICHLOROETHENE (µg/L)	5.41	100
TETRACHLOROETHENE (µg/L)	49.8	5
TRICHLOROETHENE (µg/L)	110	5
VINYL CHLORIDE (µg/L)	1.26	2

TW-5		TRGS
1,1-DICHLOROETHANE (µg/L)	1.91	798
CIS-1,2-DICHLOROETHENE (µg/L)	64.3	70
TRANS-1,2-DICHLOROETHENE (µg/L)	2.01	100
TRICHLOROETHENE (µg/L)	16.2	5
VINYL CHLORIDE (µg/L)	41.0	2



LEGEND:

- SOIL BORING / TEMPORARY MONITORING WELL LOCATION
- (µg/L)** MICROGRAMS PER LITER
- NS** NOT SAMPLED
- 342** RED TEXT INDICATES EXCEEDANCE OF MDEQ TIER 1 TARGET REMEDIATION GOALS IN GROUNDWATER

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PROJECT NUMBER: 30065901

DRAWN DATE: 11/12/18
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CITY OF LOUISVILLE
TETERS FLORAL PROPERTY
912 SOUTH CHURCH STREET
LOUISVILLE, MISSISSIPPI

DETECTED VOCs IN GROUNDWATER
(OCTOBER 10-11, 2018)

FIGURE NUMBER
8

APPENDIX B – GEOLOGIC BORING LOGS



LOG OF BORING: SB-1 / TW-1

CONSULTANTS

Client / Site Information:

Client: City of Louisville
 Site: Teters Floral Property
 Location: Louisville, MS
 Agency Interest No.: ACRES No. 237224
 PPM Project No.: 30065901-TO 15
 Project Type: Phase ESA II

Boring Information:

Date / Time: 10-08-2018 / 12:55 - 13:37
 Logged By: Regan Byrd
 Drilling Company / Driller: WHE / Chris Blissard
 Drilling Method: Geoprobe / DPT
 Total Boring Depth: 23.5 ft BGS
 Initial Saturation (ft)/Date: N/A
 Static GW level (ft)/Date: 5.98 ft BTOC
 Surface Elevation (ft): 502.54 ft
 Sampling Interval: Continuous

Well Information:

Well Type: Temporary
 Well Purpose: Sampling
 Well Construction Date: 10/08/2018
 Total Well Depth: 19.0 ft BGS
 Screened Interval: 9.0 ft BTOC - 19.00 ft BTOC
 Screen Slot Size: 0.01 ft
 Development Method: Peristaltic Pump
 Gallons Purged: -0.65

Depth in Feet	Surf. Elev. 502.54	Water Level	USCS	GRAPHIC	DESCRIPTION	Sample	Blow Count	Headspace Concentration (ppmv)	Percent Recovery	Depth in Feet	Well Schematic: TW-1
0	502				Concrete					0	TOC 503.98 ft
			MH		SILT, moderate plasticity, soft, homogeneous, slightly moist, light brown	1	N/A	0.3*	75		
		▼ 497			SANDY CLAY, low plasticity, soft, homogeneous, moist, reddish brown (blueish gray)	2	N/A	0.2	100	5	▼ 1" I.D. PVC Riser
			CL		(mottled, tan and reddish brown, iron nodules present) (firm, homogeneous, blueish gray)	3	N/A	0.2	100	10	
						4	N/A	0.2	100	15	1" I.D. Slotted PVC Screen
			SP		CLAYEY SAND, poorly graded, fine grain, very moist, gray	5	N/A	0.0	100		
			CL		SANDY CLAY, low plasticity, firm, homogeneous, slightly moist, blueish gray	6	N/A	0.0	100	20	
						7	N/A	0.0	100		
						8	N/A	0.0	100		
25					(Boring terminated at 23.5' BGS due to refusal)					25	

NOTES:

- Hand cleared to 4.0' BGS prior to drilling
- * Sample submitted for laboratory analysis
- Headspace conducted using PID, calibrated to isobutylene

- Soil descriptions generally based on visual inspection/professional judgment as described in ASTM D2488-09a: Standard Practice for Description and Identification of Soils (Visual-Manual Procedure). Laboratory testing not conducted, and the data should not be used for engineering purposes.



LOG OF BORING: SB-2 / TW-2

CONSULTANTS

Client / Site Information:

Client: City of Louisville
 Site: Teters Floral Property
 Location: Louisville, MS
 Agency Interest No.: ACRES No. 237224
 PPM Project No.: 30065901-TO 15
 Project Type: Phase ESA II

Boring Information:

Date / Time: 10-08-2018 / 14:55 - 15:25
 Logged By: Regan Byrd
 Drilling Company / Driller: WHE / Chris Blissard
 Drilling Method: Geoprobe / DPT
 Total Boring Depth: 20.0 ft BGS
 Initial Saturation (ft)/Date: N/A
 Static GW level (ft)/Date: 7.85 ft BTOC
 Surface Elevation (ft): 502.49 ft
 Sampling Interval: Continuous

Well Information:

Well Type: Temporary
 Well Purpose: Sampling
 Well Construction Date: 10/08/2018
 Total Well Depth: 16.0 ft BGS
 Screened Interval: 6.0 ft BTOC - 16.00 ft BTOC
 Screen Slot Size: 0.01 ft
 Development Method: Peristaltic Pump
 Gallons Purged: -1.10

Depth in Feet	Surf. Elev. 502.49	Water Level	USCS	GRAPHIC	DESCRIPTION	Sample	Blow Count	Headspace Concentration (ppmv)	Percent Recovery	Depth in Feet	Well Schematic: TW-2
0	502				Concrete					0	TOC 505.88 ft
					SANDY SILT, low plasticity, soft, homogeneous, moist, blueish gray, odor present (possibly diesel)	1	N/A	3,074*	80		
					(very moist, reddish brown)						
5	497					2	N/A	46.1	100		1" I.D. PVC Riser
		ML			(moist)						
10	492				(light gray)	3	N/A	6.7	100		
					(reddish brown)						
					(blueish gray)	4	N/A	92.3	100		1" I.D. Slotted PVC Screen
15	487		SM		SILTY SAND, poorly graded, fine grain, very moist, blueish gray	5	N/A	2.7	100		
						6	N/A	0.0	100		
			ML		SILT, low plasticity, firm, homogeneous, slightly moist, blueish gray	7	N/A	0.0	100		
20					(Boring terminated at 20' BGS)					20	

NOTES:

- Hand cleared to 4.0' BGS prior to drilling
- * Sample submitted for laboratory analysis
- Headspace conducted using PID, calibrated to isobutylene

- Soil descriptions generally based on visual inspection/professional judgment as described in ASTM D2488-09a: Standard Practice for Description and Identification of Soils (Visual-Manual Procedure). Laboratory testing not conducted, and the data should not be used for engineering purposes.



LOG OF BORING: SB-3 / TW-3

CONSULTANTS

Client / Site Information:

Client: City of Louisville
 Site: Teters Floral Property
 Location: Louisville, MS
 Agency Interest No.: ACRES No. 237224
 PPM Project No.: 30065901-TO 15
 Project Type: Phase ESA II

Boring Information:

Date / Time: 10-08-2018 / 15:55 - 16:13
 Logged By: Regan Byrd
 Drilling Company / Driller: WHE / Chris Blissard
 Drilling Method: Geoprobe / DPT
 Total Boring Depth: 16.0 ft BGS
 Initial Saturation (ft)/Date: N/A
 Static GW level (ft)/Date: 8.24 ft BTOC
 Surface Elevation (ft): 502.78 ft
 Sampling Interval: Continuous

Well Information:

Well Type: Temporary
 Well Purpose: Sampling
 Well Construction Date: 10/08/2018
 Total Well Depth: 16.0 ft BGS
 Screened Interval: 6.0 ft BTOC - 16.00 ft BTOC
 Screen Slot Size: 0.01 ft
 Development Method: Peristaltic Pump
 Gallons Purged: -2.00

Depth in Feet	Surf. Elev. 502.78	Water Level	USCS	GRAPHIC	Water Levels		Sample	Blow Count	Headspace Concentration (ppmv)	Percent Recovery	Depth in Feet	Well Schematic: TW-3
					▼ Static GW level	▽ Initial Saturation						
DESCRIPTION												
0					Topsoil						0	TOC 506.50 ft
502					SANDY SILT, low plasticity, soft, homogeneous, moist, light gray (gray and reddish brown with black staining)		1	N/A	34.2*	90		
5					(light gray)							
497					(reddish brown)		2	N/A	1.3	100		1" I.D. PVC Riser
10		ML			(very moist)		3	N/A	0.1	100		
492					(blueish gray)		4	N/A	0.0	100		
15					(slightly moist)		5	N/A	0.0	100		1" I.D. Slotted PVC Screen
(Boring terminated at 16' BGS)												

NOTES:

- Hand cleared to 4.0' BGS prior to drilling
- * Sample submitted for laboratory analysis
- Headspace conducted using PID, calibrated to isobutylene

- Soil descriptions generally based on visual inspection/professional judgment as described in ASTM D2488-09a: Standard Practice for Description and Identification of Soils (Visual-Manual Procedure). Laboratory testing not conducted, and the data should not be used for engineering purposes.



LOG OF BORING: SB-4 / TW-4

CONSULTANTS

Client / Site Information:

Client: City of Louisville
 Site: Teters Floral Property
 Location: Louisville, MS
 Agency Interest No.: ACRES No. 237224
 PPM Project No.: 30065901-TO 15
 Project Type: Phase ESA II

Boring Information:

Date / Time: 10-09-2018 / 9:35 - 9:55
 Logged By: Regan Byrd
 Drilling Company / Driller: WHE / Chris Blissard
 Drilling Method: Geoprobe / DPT
 Total Boring Depth: 16.0 ft BGS
 Initial Saturation (ft)/Date: 14 ft BGS
 Static GW level (ft)/Date: 8.25 ft BTOC
 Surface Elevation (ft): 501.84 ft
 Sampling Interval: Continuous

Well Information:

Well Type: Temporary
 Well Purpose: Sampling
 Well Construction Date: 10/09/2018
 Total Well Depth: 16.0 ft BGS
 Screened Interval: 6.0 ft BTOC - 16.00 ft BTOC
 Screen Slot Size: 0.01 ft
 Development Method: Peristaltic Pump
 Gallons Purged: -2.75

Depth in Feet	Surf. Elev. 501.84	Water Level	USCS	GRAPHIC	Water Levels		Sample	Blow Count	Headspace Concentration (ppmv)	Percent Recovery	Depth in Feet	Well Schematic: TW-4	
					▼ Static GW level	▽ Initial Saturation							
DESCRIPTION													
0					0' - 4' No recovery due to the softness and moisture of the soil.						0		
501							1	N/A	NR				
					SANDY SILT, low plasticity, firm, homogeneous, moist, reddish brown								
5					(gray)		2	N/A	0.0	100			
496					(soft, very moist)		3	N/A	0.9*	100			
					(firm, moist)		4	N/A	0.1	100			
10					(soft, very moist)		5	N/A	0.0	100			
491					(saturated)		6	N/A	0.0	100			
15					(Boring terminated at 16' BGS)								

NOTES:

- Hand cleared to 4.0' BGS prior to drilling
- * Sample submitted for laboratory analysis
- Headspace conducted using PID, calibrated to isobutylene

- Soil descriptions generally based on visual inspection/professional judgment as described in ASTM D2488-09a: Standard Practice for Description and Identification of Soils (Visual-Manual Procedure). Laboratory testing not conducted, and the data should not be used for engineering purposes.



LOG OF BORING: SB-5 / TW-5

CONSULTANTS

Client / Site Information:

Client: City of Louisville
 Site: Teters Floral Property
 Location: Louisville, MS
 Agency Interest No.: ACRES No. 237224
 PPM Project No.: 30065901-TO 15
 Project Type: Phase ESA II

Boring Information:

Date / Time: 10-09-2018 / 8:05 - 8:40
 Logged By: Regan Byrd
 Drilling Company / Driller: WHE / Chris Blissard
 Drilling Method: Geoprobe / DPT
 Total Boring Depth: 16.0 ft BGS
 Initial Saturation (ft)/Date: 12 ft BGS
 Static GW level (ft)/Date: 8.75 ft BTOC
 Surface Elevation (ft): 501.67 ft
 Sampling Interval: Continuous

Well Information:

Well Type: Temporary
 Well Purpose: Sampling
 Well Construction Date: 10/09/2018
 Total Well Depth: 16.0 ft BGS
 Screened Interval: 6.0 ft BTOC - 16.00 ft BTOC
 Screen Slot Size: 0.01 ft
 Development Method: Peristaltic Pump
 Gallons Purged: -2.30

Depth in Feet	Surf. Elev. 501.67	Water Level	USCS	GRAPHIC	Water Levels		Sample	Blow Count	Headspace Concentration (ppmv)	Percent Recovery	Depth in Feet	Well Schematic: TW-5
					▼ Static GW level	▽ Initial Saturation						
DESCRIPTION												
0					Topsoil						0	TOC 505.88 ft
501					SANDY SILT, low plasticity, soft, homogeneous, moist, tan and reddish brown		1	N/A	0.5	100		
					(gray)							
5					(tan and reddish brown)							
496					(firm, gray)		2	N/A	2.0"	100		1" I.D. PVC Riser
					ML							
10					(soft, saturated)		3	N/A	0.1	100		
491					(firm)		4	N/A	0.0	100		
					SM							
15					SILTY SAND, poorly graded, fine grain, wet, gray		5	N/A	0.0	100		1" I.D. Slotted PVC Screen
(Boring terminated at 16' BGS)												

NOTES:

- Hand cleared to 4.0' BGS prior to drilling
- * Sample submitted for laboratory analysis
- Headspace conducted using PID, calibrated to isobutylene

- Soil descriptions generally based on visual inspection/professional judgment as described in ASTM D2488-09a: Standard Practice for Description and Identification of Soils (Visual-Manual Procedure). Laboratory testing not conducted, and the data should not be used for engineering purposes.



LOG OF BORING: SB-6 / TW-6

CONSULTANTS

Client / Site Information:

Client: City of Louisville
 Site: Teters Floral Property
 Location: Louisville, MS
 Agency Interest No.: ACRES No. 237224
 PPM Project No.: 30065901-TO 15
 Project Type: Phase ESA II

Boring Information:

Date / Time: 10-09-2018 / 10:35 - 10:53
 Logged By: Regan Byrd
 Drilling Company / Driller: WHE / Chris Blissard
 Drilling Method: Geoprobe / DPT
 Total Boring Depth: 20.0 ft BGS
 Initial Saturation (ft)/Date: 16 ft BGS
 Static GW level (ft)/Date: 6.10 ft BTOC
 Surface Elevation (ft): 501.69 ft
 Sampling Interval: Continuous

Well Information:

Well Type: Temporary
 Well Purpose: Sampling
 Well Construction Date: 10/09/2018
 Total Well Depth: 20.0 ft BGS
 Screened Interval: 10.0 ft BTOC - 20.00 ft BTOC
 Screen Slot Size: 0.01 ft
 Development Method: Peristaltic Pump
 Gallons Purged: ~1.60

Depth in Feet	Surf. Elev. 501.69	Water Level	USCS	GRAPHIC	Water Levels		Sample	Blow Count	Headspace Concentration (ppmv)	Percent Recovery	Depth in Feet	Well Schematic: TW-6
					▼ Static GW level	▽ Initial Saturation						
DESCRIPTION												
0					Topsoil						0	
501					GRAVEL, well graded, round							
			ML		SILT, low plasticity, firm, mottled, slightly moist, black, tan, and orange		1	N/A	0.0	80		
5												
496		▼			CLAY, high plasticity, firm, mottled, slightly moist, gray, tan, and orange		2	N/A	0.0	100		1" I.D. PVC Riser
			CH									
10												
491					SANDY CLAY, low plasticity, firm, homogeneous, slightly moist, tan		3	N/A	1.7*	100		
			CL		(reddish brown)							
15					(gray)		4	N/A	0.9	100		
			CL									
486		▽			CLAYEY SAND, poorly graded, fine grain, saturated, gray		5	N/A	0.2	100		1" I.D. Slotted PVC Screen
			SC									
20					SANDY CLAY, low plasticity, firm, homogeneous, slightly moist, gray		6	N/A	0.0	100		
			CL									
(Boring terminated at 20' BGS)												

NOTES:

- Hand cleared to 4.0' BGS prior to drilling
- * Sample submitted for laboratory analysis
- Headspace conducted using PID, calibrated to isobutylene

- Soil descriptions generally based on visual inspection/professional judgment as described in ASTM D2488-09a: Standard Practice for Description and Identification of Soils (Visual-Manual Procedure). Laboratory testing not conducted, and the data should not be used for engineering purposes.



LOG OF BORING: SB-7 / TW-7

CONSULTANTS

Client / Site Information:

Client: City of Louisville
 Site: Teters Floral Property
 Location: Louisville, MS
 Agency Interest No.: ACRES No. 237224
 PPM Project No.: 30065901-TO 15
 Project Type: Phase ESA II

Boring Information:

Date / Time: 10-09-2018 / 11:50 - 12:05
 Logged By: Regan Byrd
 Drilling Company / Driller: WHE / Chris Blissard
 Drilling Method: Geoprobe / DPT
 Total Boring Depth: 23.0 ft BGS
 Initial Saturation (ft)/Date: N/A
 Static GW level (ft)/Date: N/A
 Surface Elevation (ft): 501.72 ft
 Sampling Interval: Continuous

Well Information:

Well Type: Temporary
 Well Purpose: Sampling
 Well Construction Date: 10/09/2018
 Total Well Depth: 20.5 ft BGS
 Screened Interval: 10.5 ft BTOC - 20.5 ft BTOC
 Screen Slot Size: 0.01 ft
 Development Method: Peristaltic Pump
 Gallons Purged: N/A

Depth in Feet	Surf. Elev. 501.72	Water Level	USCS	GRAPHIC	Water Levels		Sample	Blow Count	Headspace Concentration (ppmv)	Percent Recovery	Depth in Feet	Well Schematic: TW-7
					▼ Static GW level	▽ Initial Saturation						
DESCRIPTION												
0	501				Topsoil		1	N/A	0.0*	75	0	
			CL		SILTY CLAY, low plasticity, firm, homogeneous, dry, reddish brown		2	N/A	0.0	100	5	
5	496						3	N/A	0.0	100	10	
			ML		SANDY SILT, low plasticity, soft, homogeneous, moist, gray		4	N/A	0.0	100	15	
10	491						5	N/A	0.0	100	20	
			CL		CLAY, moderate plasticity, firm, mottled, tan, black, and orange		6	N/A	0.0	100	25	
15	486						7	N/A	0.0	50		
20	481											
			SC		CLAYEY SAND, poorly graded, fine grain, very moist, gray and brown							
			CL		CLAY, low plasticity, friable, homogeneous, dry, black							
(Boring terminated at 23' BGS)												

NOTES:

- Hand cleared to 4.0' BGS prior to drilling
- * Sample submitted for laboratory analysis
- Headspace conducted using PID, calibrated to isobutylene

- Soil descriptions generally based on visual inspection/professional judgment as described in ASTM D2488-09a: Standard Practice for Description and Identification of Soils (Visual-Manual Procedure). Laboratory testing not conducted, and the data should not be used for engineering purposes.



LOG OF BORING: SB-8 / TW-8

CONSULTANTS

Client / Site Information:

Client: City of Louisville
 Site: Teters Floral Property
 Location: Louisville, MS
 Agency Interest No.: ACRES No. 237224
 PPM Project No.: 30065901-TO 15
 Project Type: Phase ESA II

Boring Information:

Date / Time: 10-09-2018 / 13:15 - 13:31
 Logged By: Regan Byrd
 Drilling Company / Driller: WHE / Chris Blissard
 Drilling Method: Geoprobe / DPT
 Total Boring Depth: 24.0 ft BGS
 Initial Saturation (ft)/Date: N/A
 Static GW level (ft)/Date: 15.56 ft BTOC
 Surface Elevation (ft): 501.72 ft
 Sampling Interval: Continuous

Well Information:

Well Type: Temporary
 Well Purpose: Sampling
 Well Construction Date: 10/09/2018
 Total Well Depth: 24.0 ft BGS
 Screened Interval: 14.0 ft BTOC - 24.0 ft BTOC
 Screen Slot Size: 0.01 ft
 Development Method: Peristaltic Pump
 Gallons Purged: -3.40

Depth in Feet	Surf. Elev. 501.72	Water Level	USCS	GRAPHIC	Water Levels		Sample	Blow Count	Headspace Concentration (ppmv)	Percent Recovery	Depth in Feet	Well Schematic: TW-8
					▼ Static GW level	▽ Initial Saturation						
DESCRIPTION												
0	501				Topsoil		1	N/A	0.0*	70	0	
					SILTY CLAY, low plasticity, firm, mottled, slightly moist, tan and reddish brown							
5	496		CL		(brown)		2	N/A	0.0	100	5	
					(reddish brown and tan)							
10	491				(gray)		3	N/A	0.0	100	10	
					SANDY CLAY, low plasticity, soft, homogeneous, moist, gray							
15	486	▼	CL		(brown)		4	N/A	0.0	100	15	
					CLAYEY SAND, poorly graded, fine grain, very moist/wet, gray							
20	481		SC				5	N/A	0.0	100	20	
					CLAY, low plasticity, hard, mottled, slightly moist, reddish brown, tan, and gray							
25			CL		(Boring terminated at 24' BGS)		6	N/A	0.0	100	25	

NOTES:

- Hand cleared to 4.0' BGS prior to drilling
- * Sample submitted for laboratory analysis
- Headspace conducted using PID, calibrated to isobutylene

- Soil descriptions generally based on visual inspection/professional judgment as described in ASTM D2488-09a: Standard Practice for Description and Identification of Soils (Visual-Manual Procedure). Laboratory testing not conducted, and the data should not be used for engineering purposes.



LOG OF BORING: SB-9

CONSULTANTS

Client / Site Information:

Client: City of Louisville
 Site: Teters Floral Property
 Location: Louisville, MS
 Agency Interest No.: ACRES No. 237224
 PPM Project No.: 30065901-TO 15
 Project Type: Phase ESA II

Boring Information:

Date / Time: 10-09-2018 / 14:35 - 15:02
 Logged By: Regan Byrd
 Drilling Company / Driller: WHE / Chris Blissard
 Drilling Method: Geoprobe / DPT
 Total Boring Depth: 27.0 ft BGS
 Initial Saturation (ft)/Date: N/A
 Static GW level (ft)/Date: N/A
 Surface Elevation (ft): -501.00 ft
 Sampling Interval: Continuous

Well Information:

Well Type: N/A
 Well Purpose: N/A
 Well Construction Date: N/A
 Total Well Depth: N/A
 Screened Interval: N/A
 Screen Slot Size: N/A
 Development Method: N/A
 Gallons Purged: N/A

Depth in Feet	Surf. Elev. 501.00	Water Level	USCS	GRAPHIC	Water Levels		Sample	Blow Count	Headspace Concentration (ppmv)	Percent Recovery	Depth in Feet	Well Schematic:
					▼ Static GW level	▽ Initial Saturation						
DESCRIPTION												
0	501				CLAY, moderate plasticity, firm, mottled, dry, tan and reddish brown		1	N/A	0.0*	60	0	
5	496						2	N/A	0.0	100	5	
10	491		CL		(moist, gray)		3	N/A	0.0	100	10	
15	486				(slightly moist, gray and reddish brown)		4	N/A	0.0	100	15	
20	481		CL		SANDY CLAY, low plasticity, soft, homogeneous, moist, reddish brown		5	N/A	0.0	100	20	
			SC		CLAYEY SAND, poorly graded, fine grain, moist, reddish brown		6	N/A	0.0	100		
25			CL		CLAY, low plasticity, firm, mottled, slightly moist, black, gray, and reddish brown		7	N/A	0.0	100	25	
					(dry, dark gray)		8	N/A	0.0	100		
(Boring terminated at 27' BGS due to refusal)												

NOTES:

- Hand cleared to 4.0' BGS prior to drilling
- * Sample submitted for laboratory analysis
- Headspace conducted using PID, calibrated to isobutylene
- Soil descriptions generally based on visual inspection/professional judgment as described in ASTM D2488-09a: Standard Practice for Description and Identification of Soils (Visual-Manual Procedure). Laboratory testing not conducted, and the data should not be used for engineering purposes.

APPENDIX C – TABLES

**TABLE 1
SOIL BORING LATITUDE
AND LONGITUDE COORDINATES
TETER'S FLORAL
912 SOUTH CHURCH AVENUE
LOUISVILLE, MISSISSIPPI**

LOCATION	DATE	LATITUDE	LONGITUDE
SB-1	10/8/2018	33° 05' 58.98" N	89° 03' 35.21" W
SB-2	10/8/2018	33° 05' 59.57" N	89° 03' 35.40" W
SB-3	10/8/2018	33° 06' 00.00" N	89° 03' 35.47" W
SB-4	10/9/2018	33° 06' 00.78" N	89° 03' 35.50" W
SB-5	10/9/2018	33° 06' 01.40" N	89° 03' 35.66" W
SB-6	10/9/2018	33° 06' 04.13" N	89° 03' 34.97" W
SB-7	10/9/2018	33° 06' 03.11" N	89° 03' 28.03" W
SB-8	10/9/2018	33° 06' 01.69" N	89° 03' 27.64" W
SB-9	10/9/2018	33° 05' 56.66" N	89° 03' 27.06" W

Source(s): *PPM Consultants, Inc.*
PPM Project No. 30065901 - TO-15

TABLE 2
SOIL BORING HEADSPACE SUMMARY
TETER'S FLORAL
912 SOUTH CHURCH AVENUE
LOUISVILLE, MISSISSIPPI

BORING LOCATION	SAMPLE I.D.	SAMPLE DATE	SAMPLE INTERVAL DEPTH (FEET)	HEADSPACE READING (PPM)
SB-1	SB-1-0-4*	10/8/2018	0' - 4'	0.3*
	SB-1-4-8		4' - 8'	0.2
	SB-1-8-12		8' - 12'	0.2
	SB-1-12-16		12' - 16'	0.2
	SB-1-16-18		16' - 18'	0.0
	SB-1-18-20		18' - 20'	0.0
	SB-1-20-22		20' - 22'	0.0
	SB-1-22-23.5		22' - 23.5'	0.0
SB-2	SB-2-0-4*	10/8/2018	0' - 4'	3,074*
	SB-2-4-8		4' - 8'	46.1
	SB-2-8-12		8' - 12'	6.7
	SB-2-12-14		12' - 14'	92.3
	SB-2-14-16		14' - 16'	2.7
	SB-2-16-18		16' - 18'	0.0
	SB-2-18-20		18' - 20'	0.0
SB-3	SB-3-0-4*	10/8/2018	0' - 4'	34.2*
	SB-3-4-8		4' - 8'	1.3
	SB-3-8-12		8' - 12'	0.1
	SB-3-12-14		12' - 14'	0.0
	SB-3-14-16		14' - 16'	0.0
SB-4	SB-4-0-4	10/9/2018	0' - 4'	NR
	SB-4-4-8		4' - 8'	0.0
	SB-4-8-10*		8' - 10'	0.9*
	SB-4-10-12		10' - 12'	0.1
	SB-4-12-14		12' - 14'	0.0
	SB-4-14-16		14' - 16'	0.0
SB-5	SB-5-0-4	10/9/2018	0' - 4'	0.5
	SB-5-4-8*		4' - 8'	2.0*
	SB-5-8-12		8' - 12'	0.1
	SB-5-12-14		12' - 14'	0.0
	SB-5-14-16		14' - 16'	0.0
SB-6	SB-6-0-4	10/9/2018	0' - 4'	0.0
	SB-6-4-8		4' - 8'	0.0
	SB-6-8-12*		8' - 12'	1.7*
	SB-6-12-16		12' - 16'	0.9
	SB-6-16-18		16' - 18'	0.2
	SB-6-18-20		18' - 20'	0.0

TABLE 2
SOIL BORING HEADSPACE SUMMARY
TETER'S FLORAL
912 SOUTH CHURCH AVENUE
LOUISVILLE, MISSISSIPPI

BORING LOCATION	SAMPLE I.D.	SAMPLE DATE	SAMPLE INTERVAL DEPTH (FEET)	HEADSPACE READING (PPM)
SB-7	SB-7-0-4*	10/9/2018	0' - 4'	0.0*
	SB-7-4-8		4' - 8'	0.0
	SB-7-8-12		8' - 12'	0.0
	SB-7-12-16		12' - 16'	0.0
	SB-7-16-20		16' - 20'	0.0
	SB-7-20-22		20' - 22'	0.0
	SB-7-22-24		22' - 24'	0.0
SB-8	SB-8-0-4*	10/9/2018	0' - 4'	0.0*
	SB-8-4-8		4' - 8'	0.0
	SB-8-8-12		8' - 12'	0.0
	SB-8-12-16		12' - 16'	0.0
	SB-8-16-20		16' - 20'	0.0
	SB-8-20-24		20' - 24'	0.0
SB-9	SB-9-0-4*	10/9/2018	0' - 4'	0.0*
	SB-9-4-8		4' - 8'	0.0
	SB-9-8-12		8' - 12'	0.0
	SB-9-12-16		12' - 16'	0.0
	SB-9-16-20		16' - 20'	0.0
	SB-9-20-24		20' - 24'	0.0
	SB-9-24-26		24' - 26'	0.0
	SB-9-26-27		26' - 27'	0.0

Notes: * - Sample submitted to laboratory for analysis
Headspace analysis conducted using PhoCheck Tiger PID (calibrated to isobutylene)
ppm (parts per million)

Source(s): PPM Consultants, Inc.
PPM Project No. 30065901 - TO-15

TABLE 3A
SUMMARY OF SOIL ANALYTICAL RESULTS - DETECTED METALS, TPH-GRO, AND TPH-DRO CONSTITUENTS
TETER'S FLORAL
912 SOUTH CHURCH AVENUE
LOUISVILLE, MISSISSIPPI

SAMPLE I.D.	INTERVAL (FEET BGS)	DATE	Metals (mg/kg)					TPHs (mg/kg)	
			ARSENIC	BARIUM	CHROMIUM	LEAD	MERCURY	TPH-DRO	TPH-GRO
SB-1 0'-4'	0' - 4'	10/8/2018	<2.00	87.0	27.2	13.1	0.0326	NA	NA
SB-2 0'-4'	0' - 4'	10/8/2018	2.09	48.1	12.2	5.57	<0.0200	NA	NA
SB-3 0'-4'	0' - 4'	10/8/2018	<2.00	53.3	9.61	4.93	<0.0200	NA	NA
SB-4 8'-10'	8' - 10'	10/9/2018	3.11	39.6	11.2	6.67	<0.0200	NA	NA
SB-5 4'-8'	4' - 8'	10/9/2018	3.24	40.7	12.6	5.52	<0.0200	NA	NA
SB-6 8'-12'	8' - 12'	10/9/2018	NA	NA	NA	NA	NA	4.10	6.98
SB-7 0'-4'	0' - 4'	10/9/2018	2.74	84	20.6	11.0	0.0366	NA	NA
SB-8 0'-4'	0' - 4'	10/9/2018	<2.00	94.2	12.0	7.44	<0.0200	NA	NA
SB-9 0'-4'	0' - 4'	10/9/2018	4.08	29.1	27.4	7.63	<0.0200	NA	NA
MDEQ Tier 1 TRG Soil Unrestricted			0.426	5,480	117,000	400	10	300	200
MDEQ Tier 1 TRG Soil Restricted			3.82	14,300	3,070,000	1,700	61.3	350	300

Notes: Feet-BGS - Depth in feet below ground surface
RCRA Metals analyzed per EPA Method 6010B
Mercury analyzed per EPA Method 7471A
TPHs analyzed per EPA Method 8015

Values in **Red** font are above the MDEQ Tier 1 Restricted TRG for soil
Values in **Bold** font are above the MDEQ Tier 1 Unrestricted TRG for soil
NA - Not Analyzed

Source(s): PPM Consultants, Inc.
PPM Project No. 30067901 - TO-15

TABLE 3B
SUMMARY OF SOIL ANALYTICAL RESULTS - DETECTED VOCs CONSTITUENTS
TETER'S FLORAL
912 SOUTH CHURCH AVENUE
LOUISVILLE, MISSISSIPPI

SAMPLE I.D.	INTERVAL (FEET BGS)	DATE	VOCs (mg/kg)												
			ACETONE	1,1-DICHLOROETHANE	CIS-1,2-DICHLOROETHENE	TRANS-1,3-DICHLOROPROPENE	ETHYLBENZENE	ISOPROPYLBENZENE	N-PROPYLBENZENE	TRICHLOROETHENE	1,2,4-TRIMETHYLBENZENE	1,2,3-TRIMETHYLBENZENE	1,3,5-TRIMETHYLBENZENE	VINYL CHLORIDE	XYLENES, TOTAL
SB-1 0'-4'	0' - 4'	10/8/2018	<0.0250	<0.00250	<0.00250	<0.00500	<0.00250	<0.00250	<0.00500	<0.00100	<0.00500	<0.00500	<0.00500	<0.00250	<0.00650
SB-2 0'-4'	0' - 4'	10/8/2018	0.0621	<0.00250	<0.00250	<0.00500	0.161	0.0351	0.0719	<0.00100	0.0533	0.194	0.0153	<0.00250	0.0291
SB-3 0'-4'	0' - 4'	10/8/2018	<0.0250	<0.00250	<0.00250	<0.00500	<0.00250	<0.00250	<0.00500	<0.00100	<0.00500	<0.00500	<0.00500	<0.00250	<0.00650
SB-4 8'-10'	8' - 10'	10/9/2018	<0.0250	<0.00250	0.716	0.00633	<0.00250	<0.00250	<0.00500	0.0186	<0.00500	<0.00500	<0.00500	0.0345	<0.00650
SB-5 4'-8'	4' - 8'	10/9/2018	<0.0250	0.0107	0.673	<0.00500	<0.00250	<0.00250	<0.00500	0.0956	<0.00500	<0.00500	<0.00500	0.0635	<0.00650
SB-6 8'-12'	8' - 12'	10/9/2018	NA	NA	NA	NA	<0.00250	NA	NA	NA	NA	NA	NA	NA	<0.00650
SB-7 0'-4'	0' - 4'	10/9/2018	<0.0250	<0.00250	<0.00250	<0.00500	<0.00250	<0.00250	<0.00500	<0.00100	<0.00500	<0.00500	<0.00500	<0.00250	<0.00650
SB-8 0'-4'	0' - 4'	10/9/2018	<0.0250	<0.00250	<0.00250	<0.00500	<0.00250	<0.00250	<0.00500	<0.00100	<0.00500	<0.00500	<0.00500	<0.00250	<0.00650
SB-9 0'-4'	0' - 4'	10/9/2018	<0.0250	<0.00250	<0.00250	<0.00500	<0.00250	<0.00250	<0.00500	<0.00100	<0.00500	<0.00500	<0.00500	<0.00250	<0.00650
Duplicate	--	10/9/2018	<0.0250	<0.00250	0.186	<0.00500	<0.00250	<0.00250	<0.00500	0.00324	<0.00500	<0.00500	<0.00500	<0.00250	<0.00650
Rinsate	--	10/8/2018	<0.0500	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00300
MDEQ Tier 1 TRG Soil Unrestricted			7,820	116	782	0.352	395	9.43	490	5.17	3,910	--	436	0.426	318
MDEQ Tier 1 TRG Soil Restricted			104,000	116	1,210	0.352	395	9.43	490	7.92	102,000	--	436	0.939	318

Notes: Feet-BGS - Depth in feet below ground surface
VOCs analyzed per EPA Method 8260B
NA - Not Analyzed

Values in **Bold Red** font are above the MDEQ Tier 1 Restricted TRG for soil
Values in **Bold** font are above the MDEQ Tier 1 Unrestricted TRG for soil
Duplicate sample collected from SB-4

Source(s): PPM Consultants, Inc.
PPM Project No. 30067901 - TO-15

TABLE 4
GROUNDWATER ELEVATION SURVEY DATA
TETERS FLORAL
912 SOUTH CHURCH AVENUE
LOUISVILLE, MISSISSIPPI

LOCATION	DATE	TOC ELEV (ft)	DTP (ft-BTOC)	DTW (ft-BTOC)	PT (ft)	GW ELEV (ft)
TW-1	10/10/2018	503.98	--	5.98	--	498.00
TW-2	10/10/2018	505.88	--	7.85	--	498.03
TW-3	10/10/2018	506.50	--	8.24	--	498.26
TW-4	10/10/2018	505.84	--	8.25	--	497.59
TW-5	10/10/2018	505.88	--	8.75	--	497.13
TW-6	10/10/2018	502.35	--	6.10	--	496.25
TW-7	10/10/2018	501.72	--	DRY	--	NA
TW-8	10/10/2018	503.81	--	15.56	--	488.25

Notes:

TW - Temporary Well (1-inch well)

Source(s): PPM Consultants, Inc.

PPM Project No. 30065901 - TO-15

TOC - Top of Casing

DTW - Depth to Water ft-BTOC - Feet below Top of Casing

DTB - Depth to Bottom ft-BTOC - Feet below Top of Casing

TOC elevations are relative to the elevation datum established at the southeast corner of the former concrete loading dock, which has an estimated surface elevation of 542.00 feet.

(Source: Google Earth)

TABLE 5
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS - DETECTED CONSTITUENTS
TETER'S FLORAL
912 SOUTH CHURCH AVENUE
LOUISVILLE, MISSISSIPPI

SAMPLE ID.	DATE	Metals (µg/L)		VOCs (µg/L)																	
		BARUM	LEAD	N-BUTYLBENZENE	1,1-DICHLOROETHANE	CIS-1,2-DICHLOROETHENE	TRANS-1,2-DICHLOROETHENE	ETHYLBENZENE	ISOPROPYLBENZENE	P-ISOPROPYLTOLUENE	NAPHTHALENE	N-PROPYLBENZENE	TETRACHLOROETHENE	TOLUENE	TRICHLOROETHENE	1,2,4-TRIMETHYLBENZENE	1,2,3-TRIMETHYLBENZENE	1,3,5-TRIMETHYLBENZENE	VINYL CHLORIDE	XYLENES, TOTAL	
TW-1	10/10/2018	147	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00	
TW-2	10/10/2018	138	<5.00	1.83	<1.00	342	4.08	129	17.7	13.8	5.37	41.1	552	41.3	60.4	1,000	261	270	<1.00	1000	
TW-3	10/10/2018	101	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	11.9	3.08	3.30	<1.00	8.52	
TW-4	10/10/2018	131	<5.00	<1.00	<1.00	38.6	<1.00	<1.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	3.08	<1.00	<1.00	<1.00	66.4	<3.00	
TW-5	10/10/2018	89.3	<5.00	<1.00	1.91	64.3	2.01	<1.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	16.2	<1.00	<1.00	<1.00	41.0	<3.00	
TW-6	10/10/2018	NA	NA	NA	NA	NA	NA	<1.00	NA	NA	NA	NA	NA	<1.00	NA	NA	NA	NA	NA	<3.00	
TW-8	10/11/2018	78.3	5.65	<1.00	<1.00	86.0	5.41	<1.00	<1.00	<1.00	<5.00	<1.00	49.8	<1.00	110	<1.00	<1.00	<1.00	<1.00	1.26	<3.00
Duplicate	10/10/2018	NA	NA	2.1	<1.00	374	4.42	118	21.2	15.3	6.24	52.6	558	38.7	64.0	950	249	235	<1.00	957	
Rinsate	10/11/2018	NA	NA	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
Field Blank 1	10/11/2018	NA	NA	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
Field Blank 2	10/10/2018	NA	NA	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
Field Blank 3	10/8/2018	NA	NA	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
Field Blank 5	10/9/2018	NA	NA	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
Trip Blank 1	10/8/2018	NA	NA	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
Trip Blank 2	10/8/2018	NA	NA	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<3.00
MDEQ Tier 1 TRG		2,000	15	243	798	70	100	700	679	--	6.2	243	5	1,000	5	12.3	--	12.3	2	10,000	

Notes: mg/L = milligrams per liter
Metals analyzed per EPA Method 6010B
Volatile Organic Compounds analyzed per EPA Method 8260B
Values in **Bold Red** font are above the MDEQ Tier 1 TRG
NA - Not Analyzed
Duplicate sample was collected from temporary well TW-2.

Source(s): PPM Consultants, Inc.
PPM Project No. 30065901 - TO-15

APPENDIX D – LABORATORY ANALYTICAL REPORTS

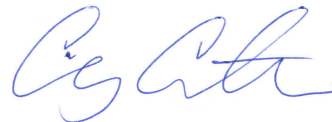
October 29, 2018

PPM Consultants - MS

Sample Delivery Group: L1034216
Samples Received: 10/12/2018
Project Number: 30064901-T015
Description: Teters Floral Property

Report To: Mr. Beau Hale
289 Commerce Park Drive, Suite D
Ridgeland, MS 39157

Entire Report Reviewed By:



Craig Cothron
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Ai⁹ Sc

SAMPLE SUMMARY



SB-1 0'-4' L1034216-01 Solid

Collected by
Megan Byrd
Collected date/time
10/08/18 12:57
Received date/time
10/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 9012B	WG1182668	1	10/18/18 13:51	10/18/18 16:49	KK
Mercury by Method 7471A	WG1180875	1	10/14/18 16:18	10/16/18 11:31	ABL
Metals (ICP) by Method 6010B	WG1180812	1	10/15/18 05:11	10/16/18 02:15	TRB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1181429	1	10/08/18 12:57	10/16/18 10:08	DWR

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

SB-2 0'-4' L1034216-02 Solid

Collected by
Megan Byrd
Collected date/time
10/08/18 14:58
Received date/time
10/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 9012B	WG1182668	1	10/18/18 13:51	10/18/18 16:50	KK
Mercury by Method 7471A	WG1180875	1	10/14/18 16:18	10/16/18 11:34	ABL
Metals (ICP) by Method 6010B	WG1180812	1	10/15/18 05:11	10/16/18 02:18	TRB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1181429	1	10/08/18 14:58	10/16/18 10:27	DWR

SB-3 0'-4' L1034216-03 Solid

Collected by
Megan Byrd
Collected date/time
10/08/18 16:01
Received date/time
10/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 9012B	WG1182668	1	10/18/18 13:51	10/18/18 16:51	KK
Mercury by Method 7471A	WG1180875	1	10/14/18 16:18	10/16/18 11:36	ABL
Metals (ICP) by Method 6010B	WG1180812	1	10/15/18 05:11	10/16/18 02:20	TRB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1181429	1	10/08/18 16:01	10/16/18 10:45	DWR

SB-4 8'-10' L1034216-04 Solid

Collected by
Megan Byrd
Collected date/time
10/09/18 09:45
Received date/time
10/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 9012B	WG1182668	1	10/18/18 13:51	10/18/18 16:52	KK
Mercury by Method 7471A	WG1180875	1	10/14/18 16:18	10/16/18 11:39	ABL
Metals (ICP) by Method 6010B	WG1180812	1	10/15/18 05:11	10/16/18 02:23	TRB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1181429	1	10/09/18 09:45	10/16/18 11:05	DWR
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1180840	1	10/15/18 17:02	10/16/18 03:18	MEC

SB-5 4'-8' L1034216-05 Solid

Collected by
Megan Byrd
Collected date/time
10/09/18 08:10
Received date/time
10/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 9012B	WG1182668	1	10/18/18 13:51	10/18/18 16:53	KK
Mercury by Method 7471A	WG1180875	1	10/14/18 16:18	10/16/18 11:41	ABL
Metals (ICP) by Method 6010B	WG1180812	1	10/15/18 05:11	10/16/18 02:26	TRB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1181429	1	10/09/18 08:10	10/16/18 11:23	DWR

SB-6 8'-12' L1034216-06 Solid

Collected by
Megan Byrd
Collected date/time
10/09/18 10:42
Received date/time
10/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1181020	25	10/09/18 10:42	10/16/18 18:32	BMB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1181866	1	10/09/18 10:42	10/16/18 22:19	JAH
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1180857	1	10/16/18 09:17	10/16/18 22:03	KME
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1181295	1	10/15/18 23:02	10/16/18 12:21	LEA

SAMPLE SUMMARY



SB-7 0'-4' L1034216-07 Solid

Collected by
Megan Byrd
Collected date/time
10/09/18 11:54
Received date/time
10/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 9012B	WG1182668	1	10/18/18 13:51	10/18/18 16:54	KK
Mercury by Method 7471A	WG1180875	1	10/14/18 16:18	10/16/18 11:44	ABL
Metals (ICP) by Method 6010B	WG1180812	1	10/15/18 05:11	10/16/18 02:28	TRB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1181654	1	10/09/18 11:54	10/16/18 13:22	DWR

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

SB-8 0'-4' L1034216-08 Solid

Collected by
Megan Byrd
Collected date/time
10/09/18 13:19
Received date/time
10/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 9012B	WG1182668	1	10/18/18 13:51	10/18/18 16:55	KK
Mercury by Method 7471A	WG1180875	1	10/14/18 16:18	10/16/18 11:47	ABL
Metals (ICP) by Method 6010B	WG1180812	1	10/15/18 05:11	10/16/18 02:31	TRB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1181654	1	10/09/18 13:19	10/16/18 13:42	DWR

SB-9 0'-4' L1034216-09 Solid

Collected by
Megan Byrd
Collected date/time
10/09/18 14:37
Received date/time
10/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 9012B	WG1183282	1	10/20/18 08:03	10/20/18 12:35	KK
Mercury by Method 7471A	WG1180875	1	10/14/18 16:18	10/16/18 11:54	ABL
Metals (ICP) by Method 6010B	WG1180812	1	10/15/18 05:11	10/16/18 02:39	TRB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1181654	1	10/09/18 14:37	10/16/18 14:02	DWR

DUPLICATE L1034216-10 Solid

Collected by
Megan Byrd
Collected date/time
10/09/18 00:00
Received date/time
10/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1181850	1	10/09/18 00:00	10/17/18 02:16	DWR

TW-1 L1034216-11 GW

Collected by
Megan Byrd
Collected date/time
10/10/18 09:49
Received date/time
10/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 4500CN E-2011	WG1183281	1	10/19/18 09:42	10/19/18 13:13	KK
Mercury by Method 7470A	WG1180340	1	10/12/18 22:19	10/15/18 13:54	ABL
Metals (ICP) by Method 6010B	WG1180204	1	10/16/18 10:42	10/17/18 00:33	ST
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1180358	1	10/13/18 04:48	10/13/18 04:48	JCP

TW-2 L1034216-12 GW

Collected by
Megan Byrd
Collected date/time
10/10/18 10:53
Received date/time
10/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 4500CN E-2011	WG1183281	1	10/19/18 09:42	10/19/18 13:14	KK
Mercury by Method 7470A	WG1180340	1	10/12/18 22:19	10/15/18 13:57	ABL
Metals (ICP) by Method 6010B	WG1180204	1	10/16/18 10:42	10/17/18 00:35	ST
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1182275	1	10/17/18 20:06	10/17/18 20:06	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1182835	20	10/18/18 13:32	10/18/18 13:32	BMB

SAMPLE SUMMARY



TW-3 L1034216-13 GW

						Collected by	Collected date/time	Received date/time
						Megan Byrd	10/10/18 12:34	10/12/18 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst			
Wet Chemistry by Method 4500CN E-2011	WG1183281	1	10/19/18 09:42	10/19/18 13:15	KK			
Mercury by Method 7470A	WG1180340	1	10/12/18 22:19	10/15/18 13:59	ABL			
Metals (ICP) by Method 6010B	WG1180204	1	10/16/18 10:42	10/17/18 00:44	ST			
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1180358	1	10/13/18 05:27	10/13/18 05:27	JCP			

1
Cp

2
Tc

3
Ss

4
Cn

TW-4 L1034216-14 GW

						Collected by	Collected date/time	Received date/time
						Megan Byrd	10/10/18 15:39	10/12/18 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst			
Wet Chemistry by Method 4500CN E-2011	WG1183281	1	10/19/18 09:42	10/19/18 13:16	KK			
Mercury by Method 7470A	WG1180340	1	10/12/18 22:19	10/15/18 14:02	ABL			
Metals (ICP) by Method 6010B	WG1180204	1	10/16/18 10:42	10/17/18 00:46	ST			
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1180358	1	10/13/18 05:47	10/13/18 05:47	JCP			
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1182011	1	10/17/18 08:23	10/18/18 17:42	LEA			

5
Sr

6
Qc

7
Gl

8
Al

TW-5 L1034216-15 GW

						Collected by	Collected date/time	Received date/time
						Megan Byrd	10/10/18 16:45	10/12/18 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst			
Wet Chemistry by Method 4500CN E-2011	WG1183281	1	10/19/18 09:42	10/19/18 13:17	KK			
Mercury by Method 7470A	WG1180340	1	10/12/18 22:19	10/15/18 14:04	ABL			
Metals (ICP) by Method 6010B	WG1180204	1	10/16/18 10:42	10/17/18 00:49	ST			
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1180358	1	10/13/18 06:07	10/13/18 06:07	JCP			

9
Sc

TW-6 L1034216-16 GW

						Collected by	Collected date/time	Received date/time
						Megan Byrd	10/10/18 18:12	10/12/18 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst			
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1180388	1	10/13/18 09:33	10/13/18 09:33	ACG			
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1180369	1	10/12/18 23:24	10/12/18 23:24	BMB			
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG1180854	1	10/15/18 11:39	10/16/18 18:14	SHG			
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1180864	1	10/14/18 19:40	10/15/18 10:01	DMG			

TW-8 L1034216-17 GW

						Collected by	Collected date/time	Received date/time
						Megan Byrd	10/11/18 10:47	10/12/18 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst			
Wet Chemistry by Method 4500CN E-2011	WG1183281	1	10/19/18 09:42	10/19/18 13:18	KK			
Mercury by Method 7470A	WG1180340	1	10/12/18 22:19	10/15/18 14:11	ABL			
Metals (ICP) by Method 6010B	WG1180204	1	10/16/18 10:42	10/17/18 00:52	ST			
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1180358	1	10/13/18 06:27	10/13/18 06:27	JCP			

DUPLICATE L1034216-18 GW

						Collected by	Collected date/time	Received date/time
						Megan Byrd	10/10/18 00:00	10/12/18 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst			
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1180358	1	10/13/18 06:47	10/13/18 06:47	JCP			
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1182275	50	10/17/18 21:05	10/17/18 21:05	ACG			

SAMPLE SUMMARY



EQUIP RINSE S L1034216-19 GW					
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Collected by Megan Byrd Collected date/time 10/08/18 16:40 Received date/time 10/12/18 08:45					
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1180358	1	10/13/18 07:07	10/13/18 07:07	JCP
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1182835	1	10/18/18 13:52	10/18/18 13:52	BMB
EQUIP RINSE GW L1034216-20 GW					
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Collected by Megan Byrd Collected date/time 10/11/18 10:56 Received date/time 10/12/18 08:45					
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1180358	1	10/13/18 07:27	10/13/18 07:27	JCP
FIELD BLANK 1 L1034216-21 GW					
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Collected by Megan Byrd Collected date/time 10/11/18 08:56 Received date/time 10/12/18 08:45					
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1180358	1	10/13/18 07:47	10/13/18 07:47	JCP
FIELD BLANK 2 L1034216-22 GW					
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Collected by Megan Byrd Collected date/time 10/10/18 15:23 Received date/time 10/12/18 08:45					
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1180358	1	10/13/18 08:07	10/13/18 08:07	JCP
FIELD BLANK 3 L1034216-23 GW					
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Collected by Megan Byrd Collected date/time 10/08/18 15:20 Received date/time 10/12/18 08:45					
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1180358	1	10/13/18 08:27	10/13/18 08:27	JCP
FIELD BLANK 5 L1034216-24 GW					
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Collected by Megan Byrd Collected date/time 10/09/18 10:45 Received date/time 10/12/18 08:45					
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1180358	1	10/13/18 08:47	10/13/18 08:47	JCP
TRIP BLANK 1 L1034216-25 GW					
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Collected by Megan Byrd Collected date/time 10/08/18 00:00 Received date/time 10/12/18 08:45					
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1184957	1	10/23/18 13:55	10/23/18 13:55	BMB
TRIP BLANK 2 L1034216-26 GW					
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Collected by Megan Byrd Collected date/time 10/08/18 00:00 Received date/time 10/12/18 08:45					
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1184957	1	10/23/18 14:14	10/23/18 14:14	BMB

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Craig Cothron
Project Manager

- ¹ Cp
- ² Tc
- ³ Ss
- ⁴ Cn
- ⁵ Sr
- ⁶ Qc
- ⁷ Gl
- ⁸ Al
- ⁹ Sc



Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Cyanide	ND		0.250	1	10/18/2018 16:49	WG1182668

Mercury by Method 7471A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	0.0326		0.0200	1	10/16/2018 11:31	WG1180875

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.00	1	10/16/2018 02:15	WG1180812
Barium	87.0		0.500	1	10/16/2018 02:15	WG1180812
Cadmium	ND		0.500	1	10/16/2018 02:15	WG1180812
Chromium	27.2		1.00	1	10/16/2018 02:15	WG1180812
Lead	13.1		0.500	1	10/16/2018 02:15	WG1180812
Selenium	ND		2.00	1	10/16/2018 02:15	WG1180812
Silver	ND		1.00	1	10/16/2018 02:15	WG1180812

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0250	1	10/16/2018 10:08	WG1181429
Acrylonitrile	ND		0.0125	1	10/16/2018 10:08	WG1181429
Benzene	ND		0.00100	1	10/16/2018 10:08	WG1181429
Bromobenzene	ND		0.0125	1	10/16/2018 10:08	WG1181429
Bromodichloromethane	ND		0.00250	1	10/16/2018 10:08	WG1181429
Bromoform	ND		0.0250	1	10/16/2018 10:08	WG1181429
Bromomethane	ND		0.0125	1	10/16/2018 10:08	WG1181429
n-Butylbenzene	ND		0.0125	1	10/16/2018 10:08	WG1181429
sec-Butylbenzene	ND		0.0125	1	10/16/2018 10:08	WG1181429
tert-Butylbenzene	ND		0.00500	1	10/16/2018 10:08	WG1181429
Carbon tetrachloride	ND		0.00500	1	10/16/2018 10:08	WG1181429
Chlorobenzene	ND	J4	0.00250	1	10/16/2018 10:08	WG1181429
Chlorodibromomethane	ND		0.00250	1	10/16/2018 10:08	WG1181429
Chloroethane	ND		0.00500	1	10/16/2018 10:08	WG1181429
Chloroform	ND		0.00250	1	10/16/2018 10:08	WG1181429
Chloromethane	ND		0.0125	1	10/16/2018 10:08	WG1181429
2-Chlorotoluene	ND		0.00250	1	10/16/2018 10:08	WG1181429
4-Chlorotoluene	ND		0.00500	1	10/16/2018 10:08	WG1181429
1,2-Dibromo-3-Chloropropane	ND		0.0250	1	10/16/2018 10:08	WG1181429
1,2-Dibromoethane	ND		0.00250	1	10/16/2018 10:08	WG1181429
Dibromomethane	ND		0.00500	1	10/16/2018 10:08	WG1181429
1,2-Dichlorobenzene	ND		0.00500	1	10/16/2018 10:08	WG1181429
1,3-Dichlorobenzene	ND		0.00500	1	10/16/2018 10:08	WG1181429
1,4-Dichlorobenzene	ND		0.00500	1	10/16/2018 10:08	WG1181429
Dichlorodifluoromethane	ND		0.00250	1	10/16/2018 10:08	WG1181429
1,1-Dichloroethane	ND		0.00250	1	10/16/2018 10:08	WG1181429
1,2-Dichloroethane	ND		0.00250	1	10/16/2018 10:08	WG1181429
1,1-Dichloroethene	ND		0.00250	1	10/16/2018 10:08	WG1181429
cis-1,2-Dichloroethene	ND		0.00250	1	10/16/2018 10:08	WG1181429
trans-1,2-Dichloroethene	ND		0.00500	1	10/16/2018 10:08	WG1181429
1,2-Dichloropropane	ND		0.00500	1	10/16/2018 10:08	WG1181429
1,1-Dichloropropene	ND		0.00250	1	10/16/2018 10:08	WG1181429
1,3-Dichloropropane	ND		0.00500	1	10/16/2018 10:08	WG1181429

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00250	1	10/16/2018 10:08	WG1181429
trans-1,3-Dichloropropene	ND		0.00500	1	10/16/2018 10:08	WG1181429
2,2-Dichloropropane	ND		0.00250	1	10/16/2018 10:08	WG1181429
Di-isopropyl ether	ND		0.00100	1	10/16/2018 10:08	WG1181429
Ethylbenzene	ND		0.00250	1	10/16/2018 10:08	WG1181429
Hexachloro-1,3-butadiene	ND		0.0250	1	10/16/2018 10:08	WG1181429
Isopropylbenzene	ND		0.00250	1	10/16/2018 10:08	WG1181429
p-Isopropyltoluene	ND		0.00500	1	10/16/2018 10:08	WG1181429
2-Butanone (MEK)	ND		0.0250	1	10/16/2018 10:08	WG1181429
Methylene Chloride	ND		0.0250	1	10/16/2018 10:08	WG1181429
4-Methyl-2-pentanone (MIBK)	ND		0.0250	1	10/16/2018 10:08	WG1181429
Methyl tert-butyl ether	ND		0.00100	1	10/16/2018 10:08	WG1181429
Naphthalene	ND		0.0125	1	10/16/2018 10:08	WG1181429
n-Propylbenzene	ND		0.00500	1	10/16/2018 10:08	WG1181429
Styrene	ND		0.0125	1	10/16/2018 10:08	WG1181429
1,1,1,2-Tetrachloroethane	ND		0.00250	1	10/16/2018 10:08	WG1181429
1,1,2,2-Tetrachloroethane	ND		0.00250	1	10/16/2018 10:08	WG1181429
1,1,2-Trichlorotrifluoroethane	ND		0.00250	1	10/16/2018 10:08	WG1181429
Tetrachloroethene	ND	J4	0.00250	1	10/16/2018 10:08	WG1181429
Toluene	ND		0.00500	1	10/16/2018 10:08	WG1181429
1,2,3-Trichlorobenzene	ND		0.00250	1	10/16/2018 10:08	WG1181429
1,2,4-Trichlorobenzene	ND		0.0125	1	10/16/2018 10:08	WG1181429
1,1,1-Trichloroethane	ND		0.00250	1	10/16/2018 10:08	WG1181429
1,1,2-Trichloroethane	ND		0.00250	1	10/16/2018 10:08	WG1181429
Trichloroethene	ND		0.00100	1	10/16/2018 10:08	WG1181429
Trichlorofluoromethane	ND		0.00250	1	10/16/2018 10:08	WG1181429
1,2,3-Trichloropropane	ND		0.0125	1	10/16/2018 10:08	WG1181429
1,2,4-Trimethylbenzene	ND		0.00500	1	10/16/2018 10:08	WG1181429
1,2,3-Trimethylbenzene	ND		0.00500	1	10/16/2018 10:08	WG1181429
1,3,5-Trimethylbenzene	ND		0.00500	1	10/16/2018 10:08	WG1181429
Vinyl chloride	ND		0.00250	1	10/16/2018 10:08	WG1181429
Xylenes, Total	ND		0.00650	1	10/16/2018 10:08	WG1181429
(S) Toluene-d8	103		75.0-131		10/16/2018 10:08	WG1181429
(S) Dibromofluoromethane	114		65.0-129		10/16/2018 10:08	WG1181429
(S) 4-Bromofluorobenzene	100		67.0-138		10/16/2018 10:08	WG1181429

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Cyanide	ND		0.250	1	10/18/2018 16:50	WG1182668

Mercury by Method 7471A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0200	1	10/16/2018 11:34	WG1180875

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	2.09		2.00	1	10/16/2018 02:18	WG1180812
Barium	48.1		0.500	1	10/16/2018 02:18	WG1180812
Cadmium	ND		0.500	1	10/16/2018 02:18	WG1180812
Chromium	12.2		1.00	1	10/16/2018 02:18	WG1180812
Lead	5.57		0.500	1	10/16/2018 02:18	WG1180812
Selenium	ND		2.00	1	10/16/2018 02:18	WG1180812
Silver	ND		1.00	1	10/16/2018 02:18	WG1180812

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	0.0621		0.0250	1	10/16/2018 10:27	WG1181429
Acrylonitrile	ND		0.0125	1	10/16/2018 10:27	WG1181429
Benzene	ND		0.00100	1	10/16/2018 10:27	WG1181429
Bromobenzene	ND		0.0125	1	10/16/2018 10:27	WG1181429
Bromodichloromethane	ND		0.00250	1	10/16/2018 10:27	WG1181429
Bromoform	ND		0.0250	1	10/16/2018 10:27	WG1181429
Bromomethane	ND		0.0125	1	10/16/2018 10:27	WG1181429
n-Butylbenzene	ND		0.0125	1	10/16/2018 10:27	WG1181429
sec-Butylbenzene	ND		0.0125	1	10/16/2018 10:27	WG1181429
tert-Butylbenzene	ND		0.00500	1	10/16/2018 10:27	WG1181429
Carbon tetrachloride	ND		0.00500	1	10/16/2018 10:27	WG1181429
Chlorobenzene	ND	J4	0.00250	1	10/16/2018 10:27	WG1181429
Chlorodibromomethane	ND		0.00250	1	10/16/2018 10:27	WG1181429
Chloroethane	ND		0.00500	1	10/16/2018 10:27	WG1181429
Chloroform	ND		0.00250	1	10/16/2018 10:27	WG1181429
Chloromethane	ND		0.0125	1	10/16/2018 10:27	WG1181429
2-Chlorotoluene	ND		0.00250	1	10/16/2018 10:27	WG1181429
4-Chlorotoluene	ND		0.00500	1	10/16/2018 10:27	WG1181429
1,2-Dibromo-3-Chloropropane	ND		0.0250	1	10/16/2018 10:27	WG1181429
1,2-Dibromoethane	ND		0.00250	1	10/16/2018 10:27	WG1181429
Dibromomethane	ND		0.00500	1	10/16/2018 10:27	WG1181429
1,2-Dichlorobenzene	ND		0.00500	1	10/16/2018 10:27	WG1181429
1,3-Dichlorobenzene	ND		0.00500	1	10/16/2018 10:27	WG1181429
1,4-Dichlorobenzene	ND		0.00500	1	10/16/2018 10:27	WG1181429
Dichlorodifluoromethane	ND		0.00250	1	10/16/2018 10:27	WG1181429
1,1-Dichloroethane	ND		0.00250	1	10/16/2018 10:27	WG1181429
1,2-Dichloroethane	ND		0.00250	1	10/16/2018 10:27	WG1181429
1,1-Dichloroethene	ND		0.00250	1	10/16/2018 10:27	WG1181429
cis-1,2-Dichloroethene	ND		0.00250	1	10/16/2018 10:27	WG1181429
trans-1,2-Dichloroethene	ND		0.00500	1	10/16/2018 10:27	WG1181429
1,2-Dichloropropane	ND		0.00500	1	10/16/2018 10:27	WG1181429
1,1-Dichloropropene	ND		0.00250	1	10/16/2018 10:27	WG1181429
1,3-Dichloropropane	ND		0.00500	1	10/16/2018 10:27	WG1181429

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00250	1	10/16/2018 10:27	WG1181429
trans-1,3-Dichloropropene	ND		0.00500	1	10/16/2018 10:27	WG1181429
2,2-Dichloropropane	ND		0.00250	1	10/16/2018 10:27	WG1181429
Di-isopropyl ether	ND		0.00100	1	10/16/2018 10:27	WG1181429
Ethylbenzene	0.161		0.00250	1	10/16/2018 10:27	WG1181429
Hexachloro-1,3-butadiene	ND		0.0250	1	10/16/2018 10:27	WG1181429
Isopropylbenzene	0.0351		0.00250	1	10/16/2018 10:27	WG1181429
p-Isopropyltoluene	ND		0.00500	1	10/16/2018 10:27	WG1181429
2-Butanone (MEK)	ND		0.0250	1	10/16/2018 10:27	WG1181429
Methylene Chloride	ND		0.0250	1	10/16/2018 10:27	WG1181429
4-Methyl-2-pentanone (MIBK)	ND		0.0250	1	10/16/2018 10:27	WG1181429
Methyl tert-butyl ether	ND		0.00100	1	10/16/2018 10:27	WG1181429
Naphthalene	ND		0.0125	1	10/16/2018 10:27	WG1181429
n-Propylbenzene	0.0719		0.00500	1	10/16/2018 10:27	WG1181429
Styrene	ND		0.0125	1	10/16/2018 10:27	WG1181429
1,1,1,2-Tetrachloroethane	ND		0.00250	1	10/16/2018 10:27	WG1181429
1,1,2,2-Tetrachloroethane	ND		0.00250	1	10/16/2018 10:27	WG1181429
1,1,2-Trichlorotrifluoroethane	ND		0.00250	1	10/16/2018 10:27	WG1181429
Tetrachloroethene	ND	J4	0.00250	1	10/16/2018 10:27	WG1181429
Toluene	ND		0.00500	1	10/16/2018 10:27	WG1181429
1,2,3-Trichlorobenzene	ND		0.00250	1	10/16/2018 10:27	WG1181429
1,2,4-Trichlorobenzene	ND		0.0125	1	10/16/2018 10:27	WG1181429
1,1,1-Trichloroethane	ND		0.00250	1	10/16/2018 10:27	WG1181429
1,1,2-Trichloroethane	ND		0.00250	1	10/16/2018 10:27	WG1181429
Trichloroethene	ND		0.00100	1	10/16/2018 10:27	WG1181429
Trichlorofluoromethane	ND		0.00250	1	10/16/2018 10:27	WG1181429
1,2,3-Trichloropropane	ND		0.0125	1	10/16/2018 10:27	WG1181429
1,2,4-Trimethylbenzene	0.0533		0.00500	1	10/16/2018 10:27	WG1181429
1,2,3-Trimethylbenzene	0.194		0.00500	1	10/16/2018 10:27	WG1181429
1,3,5-Trimethylbenzene	0.0153		0.00500	1	10/16/2018 10:27	WG1181429
Vinyl chloride	ND		0.00250	1	10/16/2018 10:27	WG1181429
Xylenes, Total	0.0291		0.00650	1	10/16/2018 10:27	WG1181429
(S) Toluene-d8	106		75.0-131		10/16/2018 10:27	WG1181429
(S) Dibromofluoromethane	114		65.0-129		10/16/2018 10:27	WG1181429
(S) 4-Bromofluorobenzene	106		67.0-138		10/16/2018 10:27	WG1181429

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Cyanide	ND		0.250	1	10/18/2018 16:51	WG1182668

Mercury by Method 7471A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0200	1	10/16/2018 11:36	WG1180875

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.00	1	10/16/2018 02:20	WG1180812
Barium	53.3		0.500	1	10/16/2018 02:20	WG1180812
Cadmium	ND		0.500	1	10/16/2018 02:20	WG1180812
Chromium	9.61		1.00	1	10/16/2018 02:20	WG1180812
Lead	4.93		0.500	1	10/16/2018 02:20	WG1180812
Selenium	ND		2.00	1	10/16/2018 02:20	WG1180812
Silver	ND		1.00	1	10/16/2018 02:20	WG1180812

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0250	1	10/16/2018 10:45	WG1181429
Acrylonitrile	ND		0.0125	1	10/16/2018 10:45	WG1181429
Benzene	ND		0.00100	1	10/16/2018 10:45	WG1181429
Bromobenzene	ND		0.0125	1	10/16/2018 10:45	WG1181429
Bromodichloromethane	ND		0.00250	1	10/16/2018 10:45	WG1181429
Bromoform	ND		0.0250	1	10/16/2018 10:45	WG1181429
Bromomethane	ND		0.0125	1	10/16/2018 10:45	WG1181429
n-Butylbenzene	ND		0.0125	1	10/16/2018 10:45	WG1181429
sec-Butylbenzene	ND		0.0125	1	10/16/2018 10:45	WG1181429
tert-Butylbenzene	ND		0.00500	1	10/16/2018 10:45	WG1181429
Carbon tetrachloride	ND		0.00500	1	10/16/2018 10:45	WG1181429
Chlorobenzene	ND	<u>J4</u>	0.00250	1	10/16/2018 10:45	WG1181429
Chlorodibromomethane	ND		0.00250	1	10/16/2018 10:45	WG1181429
Chloroethane	ND		0.00500	1	10/16/2018 10:45	WG1181429
Chloroform	ND		0.00250	1	10/16/2018 10:45	WG1181429
Chloromethane	ND		0.0125	1	10/16/2018 10:45	WG1181429
2-Chlorotoluene	ND		0.00250	1	10/16/2018 10:45	WG1181429
4-Chlorotoluene	ND		0.00500	1	10/16/2018 10:45	WG1181429
1,2-Dibromo-3-Chloropropane	ND		0.0250	1	10/16/2018 10:45	WG1181429
1,2-Dibromoethane	ND		0.00250	1	10/16/2018 10:45	WG1181429
Dibromomethane	ND		0.00500	1	10/16/2018 10:45	WG1181429
1,2-Dichlorobenzene	ND		0.00500	1	10/16/2018 10:45	WG1181429
1,3-Dichlorobenzene	ND		0.00500	1	10/16/2018 10:45	WG1181429
1,4-Dichlorobenzene	ND		0.00500	1	10/16/2018 10:45	WG1181429
Dichlorodifluoromethane	ND		0.00250	1	10/16/2018 10:45	WG1181429
1,1-Dichloroethane	ND		0.00250	1	10/16/2018 10:45	WG1181429
1,2-Dichloroethane	ND		0.00250	1	10/16/2018 10:45	WG1181429
1,1-Dichloroethene	ND		0.00250	1	10/16/2018 10:45	WG1181429
cis-1,2-Dichloroethene	ND		0.00250	1	10/16/2018 10:45	WG1181429
trans-1,2-Dichloroethene	ND		0.00500	1	10/16/2018 10:45	WG1181429
1,2-Dichloropropane	ND		0.00500	1	10/16/2018 10:45	WG1181429
1,1-Dichloropropene	ND		0.00250	1	10/16/2018 10:45	WG1181429
1,3-Dichloropropane	ND		0.00500	1	10/16/2018 10:45	WG1181429

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00250	1	10/16/2018 10:45	WG1181429
trans-1,3-Dichloropropene	ND		0.00500	1	10/16/2018 10:45	WG1181429
2,2-Dichloropropane	ND		0.00250	1	10/16/2018 10:45	WG1181429
Di-isopropyl ether	ND		0.00100	1	10/16/2018 10:45	WG1181429
Ethylbenzene	ND		0.00250	1	10/16/2018 10:45	WG1181429
Hexachloro-1,3-butadiene	ND		0.0250	1	10/16/2018 10:45	WG1181429
Isopropylbenzene	ND		0.00250	1	10/16/2018 10:45	WG1181429
p-Isopropyltoluene	ND		0.00500	1	10/16/2018 10:45	WG1181429
2-Butanone (MEK)	ND		0.0250	1	10/16/2018 10:45	WG1181429
Methylene Chloride	ND		0.0250	1	10/16/2018 10:45	WG1181429
4-Methyl-2-pentanone (MIBK)	ND		0.0250	1	10/16/2018 10:45	WG1181429
Methyl tert-butyl ether	ND		0.00100	1	10/16/2018 10:45	WG1181429
Naphthalene	ND		0.0125	1	10/16/2018 10:45	WG1181429
n-Propylbenzene	ND		0.00500	1	10/16/2018 10:45	WG1181429
Styrene	ND		0.0125	1	10/16/2018 10:45	WG1181429
1,1,1,2-Tetrachloroethane	ND		0.00250	1	10/16/2018 10:45	WG1181429
1,1,2,2-Tetrachloroethane	ND		0.00250	1	10/16/2018 10:45	WG1181429
1,1,2-Trichlorotrifluoroethane	ND		0.00250	1	10/16/2018 10:45	WG1181429
Tetrachloroethene	ND	J4	0.00250	1	10/16/2018 10:45	WG1181429
Toluene	ND		0.00500	1	10/16/2018 10:45	WG1181429
1,2,3-Trichlorobenzene	ND		0.00250	1	10/16/2018 10:45	WG1181429
1,2,4-Trichlorobenzene	ND		0.0125	1	10/16/2018 10:45	WG1181429
1,1,1-Trichloroethane	ND		0.00250	1	10/16/2018 10:45	WG1181429
1,1,2-Trichloroethane	ND		0.00250	1	10/16/2018 10:45	WG1181429
Trichloroethene	ND		0.00100	1	10/16/2018 10:45	WG1181429
Trichlorofluoromethane	ND		0.00250	1	10/16/2018 10:45	WG1181429
1,2,3-Trichloropropane	ND		0.0125	1	10/16/2018 10:45	WG1181429
1,2,4-Trimethylbenzene	ND		0.00500	1	10/16/2018 10:45	WG1181429
1,2,3-Trimethylbenzene	ND		0.00500	1	10/16/2018 10:45	WG1181429
1,3,5-Trimethylbenzene	ND		0.00500	1	10/16/2018 10:45	WG1181429
Vinyl chloride	ND		0.00250	1	10/16/2018 10:45	WG1181429
Xylenes, Total	ND		0.00650	1	10/16/2018 10:45	WG1181429
(S) Toluene-d8	106		75.0-131		10/16/2018 10:45	WG1181429
(S) Dibromofluoromethane	116		65.0-129		10/16/2018 10:45	WG1181429
(S) 4-Bromofluorobenzene	108		67.0-138		10/16/2018 10:45	WG1181429

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Cyanide	ND		0.250	1	10/18/2018 16:52	WG1182668

Mercury by Method 7471A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0200	1	10/16/2018 11:39	WG1180875

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	3.11		2.00	1	10/16/2018 02:23	WG1180812
Barium	39.6		0.500	1	10/16/2018 02:23	WG1180812
Cadmium	ND		0.500	1	10/16/2018 02:23	WG1180812
Chromium	11.2		1.00	1	10/16/2018 02:23	WG1180812
Lead	6.67		0.500	1	10/16/2018 02:23	WG1180812
Selenium	ND		2.00	1	10/16/2018 02:23	WG1180812
Silver	ND		1.00	1	10/16/2018 02:23	WG1180812

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0250	1	10/16/2018 11:05	WG1181429
Acrylonitrile	ND		0.0125	1	10/16/2018 11:05	WG1181429
Benzene	ND		0.00100	1	10/16/2018 11:05	WG1181429
Bromobenzene	ND		0.0125	1	10/16/2018 11:05	WG1181429
Bromodichloromethane	ND		0.00250	1	10/16/2018 11:05	WG1181429
Bromoform	ND		0.0250	1	10/16/2018 11:05	WG1181429
Bromomethane	ND		0.0125	1	10/16/2018 11:05	WG1181429
n-Butylbenzene	ND		0.0125	1	10/16/2018 11:05	WG1181429
sec-Butylbenzene	ND		0.0125	1	10/16/2018 11:05	WG1181429
tert-Butylbenzene	ND		0.00500	1	10/16/2018 11:05	WG1181429
Carbon tetrachloride	ND		0.00500	1	10/16/2018 11:05	WG1181429
Chlorobenzene	ND	<u>J4</u>	0.00250	1	10/16/2018 11:05	WG1181429
Chlorodibromomethane	ND		0.00250	1	10/16/2018 11:05	WG1181429
Chloroethane	ND		0.00500	1	10/16/2018 11:05	WG1181429
Chloroform	ND		0.00250	1	10/16/2018 11:05	WG1181429
Chloromethane	ND		0.0125	1	10/16/2018 11:05	WG1181429
2-Chlorotoluene	ND		0.00250	1	10/16/2018 11:05	WG1181429
4-Chlorotoluene	ND		0.00500	1	10/16/2018 11:05	WG1181429
1,2-Dibromo-3-Chloropropane	ND		0.0250	1	10/16/2018 11:05	WG1181429
1,2-Dibromoethane	ND		0.00250	1	10/16/2018 11:05	WG1181429
Dibromomethane	ND		0.00500	1	10/16/2018 11:05	WG1181429
1,2-Dichlorobenzene	ND		0.00500	1	10/16/2018 11:05	WG1181429
1,3-Dichlorobenzene	ND		0.00500	1	10/16/2018 11:05	WG1181429
1,4-Dichlorobenzene	ND		0.00500	1	10/16/2018 11:05	WG1181429
Dichlorodifluoromethane	ND		0.00250	1	10/16/2018 11:05	WG1181429
1,1-Dichloroethane	ND		0.00250	1	10/16/2018 11:05	WG1181429
1,2-Dichloroethane	ND		0.00250	1	10/16/2018 11:05	WG1181429
1,1-Dichloroethene	ND		0.00250	1	10/16/2018 11:05	WG1181429
cis-1,2-Dichloroethene	0.716		0.00250	1	10/16/2018 11:05	WG1181429
trans-1,2-Dichloroethene	ND		0.00500	1	10/16/2018 11:05	WG1181429
1,2-Dichloropropane	ND		0.00500	1	10/16/2018 11:05	WG1181429
1,1-Dichloropropene	ND		0.00250	1	10/16/2018 11:05	WG1181429
1,3-Dichloropropane	ND		0.00500	1	10/16/2018 11:05	WG1181429

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00250	1	10/16/2018 11:05	WG1181429
trans-1,3-Dichloropropene	0.00633		0.00500	1	10/16/2018 11:05	WG1181429
2,2-Dichloropropane	ND		0.00250	1	10/16/2018 11:05	WG1181429
Di-isopropyl ether	ND		0.00100	1	10/16/2018 11:05	WG1181429
Ethylbenzene	ND		0.00250	1	10/16/2018 11:05	WG1181429
Hexachloro-1,3-butadiene	ND		0.0250	1	10/16/2018 11:05	WG1181429
Isopropylbenzene	ND		0.00250	1	10/16/2018 11:05	WG1181429
p-Isopropyltoluene	ND		0.00500	1	10/16/2018 11:05	WG1181429
2-Butanone (MEK)	ND		0.0250	1	10/16/2018 11:05	WG1181429
Methylene Chloride	ND		0.0250	1	10/16/2018 11:05	WG1181429
4-Methyl-2-pentanone (MIBK)	ND		0.0250	1	10/16/2018 11:05	WG1181429
Methyl tert-butyl ether	ND		0.00100	1	10/16/2018 11:05	WG1181429
Naphthalene	ND		0.0125	1	10/16/2018 11:05	WG1181429
n-Propylbenzene	ND		0.00500	1	10/16/2018 11:05	WG1181429
Styrene	ND		0.0125	1	10/16/2018 11:05	WG1181429
1,1,1,2-Tetrachloroethane	ND		0.00250	1	10/16/2018 11:05	WG1181429
1,1,2,2-Tetrachloroethane	ND		0.00250	1	10/16/2018 11:05	WG1181429
1,1,2-Trichlorotrifluoroethane	ND		0.00250	1	10/16/2018 11:05	WG1181429
Tetrachloroethene	ND	J4	0.00250	1	10/16/2018 11:05	WG1181429
Toluene	ND		0.00500	1	10/16/2018 11:05	WG1181429
1,2,3-Trichlorobenzene	ND		0.00250	1	10/16/2018 11:05	WG1181429
1,2,4-Trichlorobenzene	ND		0.0125	1	10/16/2018 11:05	WG1181429
1,1,1-Trichloroethane	ND		0.00250	1	10/16/2018 11:05	WG1181429
1,1,2-Trichloroethane	ND		0.00250	1	10/16/2018 11:05	WG1181429
Trichloroethene	0.0186		0.00100	1	10/16/2018 11:05	WG1181429
Trichlorofluoromethane	ND		0.00250	1	10/16/2018 11:05	WG1181429
1,2,3-Trichloropropane	ND		0.0125	1	10/16/2018 11:05	WG1181429
1,2,4-Trimethylbenzene	ND		0.00500	1	10/16/2018 11:05	WG1181429
1,2,3-Trimethylbenzene	ND		0.00500	1	10/16/2018 11:05	WG1181429
1,3,5-Trimethylbenzene	ND		0.00500	1	10/16/2018 11:05	WG1181429
Vinyl chloride	0.0345		0.00250	1	10/16/2018 11:05	WG1181429
Xylenes, Total	ND		0.00650	1	10/16/2018 11:05	WG1181429
(S) Toluene-d8	96.4		75.0-131		10/16/2018 11:05	WG1181429
(S) Dibromofluoromethane	113		65.0-129		10/16/2018 11:05	WG1181429
(S) 4-Bromofluorobenzene	104		67.0-138		10/16/2018 11:05	WG1181429

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	ND		0.0333	1	10/16/2018 03:18	WG1180840
Acenaphthylene	ND		0.0333	1	10/16/2018 03:18	WG1180840
Anthracene	ND		0.0333	1	10/16/2018 03:18	WG1180840
Benidine	ND	J4	0.333	1	10/16/2018 03:18	WG1180840
Benzo(a)anthracene	ND		0.0333	1	10/16/2018 03:18	WG1180840
Benzo(b)fluoranthene	ND		0.0333	1	10/16/2018 03:18	WG1180840
Benzo(k)fluoranthene	ND		0.0333	1	10/16/2018 03:18	WG1180840
Benzo(g,h,i)perylene	ND		0.0333	1	10/16/2018 03:18	WG1180840
Benzo(a)pyrene	ND		0.0333	1	10/16/2018 03:18	WG1180840
Bis(2-chloroethoxy)methane	ND		0.333	1	10/16/2018 03:18	WG1180840
Bis(2-chloroethyl)ether	ND		0.333	1	10/16/2018 03:18	WG1180840
Bis(2-chloroisopropyl)ether	ND		0.333	1	10/16/2018 03:18	WG1180840
4-Bromophenyl-phenylether	ND		0.333	1	10/16/2018 03:18	WG1180840
2-Chloronaphthalene	ND		0.0333	1	10/16/2018 03:18	WG1180840
4-Chlorophenyl-phenylether	ND		0.333	1	10/16/2018 03:18	WG1180840
Chrysene	ND		0.0333	1	10/16/2018 03:18	WG1180840
Dibenz(a,h)anthracene	ND		0.0333	1	10/16/2018 03:18	WG1180840



Collected date/time: 10/09/18 09:45

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Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
3,3-Dichlorobenzidine	ND		0.333	1	10/16/2018 03:18	WG1180840
2,4-Dinitrotoluene	ND		0.333	1	10/16/2018 03:18	WG1180840
2,6-Dinitrotoluene	ND		0.333	1	10/16/2018 03:18	WG1180840
Fluoranthene	ND		0.0333	1	10/16/2018 03:18	WG1180840
Fluorene	ND		0.0333	1	10/16/2018 03:18	WG1180840
Hexachlorobenzene	ND		0.333	1	10/16/2018 03:18	WG1180840
Hexachloro-1,3-butadiene	ND		0.333	1	10/16/2018 03:18	WG1180840
Hexachlorocyclopentadiene	ND		0.333	1	10/16/2018 03:18	WG1180840
Hexachloroethane	ND		0.333	1	10/16/2018 03:18	WG1180840
Indeno(1,2,3-cd)pyrene	ND		0.0333	1	10/16/2018 03:18	WG1180840
Isophorone	ND		0.333	1	10/16/2018 03:18	WG1180840
Naphthalene	ND		0.0333	1	10/16/2018 03:18	WG1180840
Nitrobenzene	ND		0.333	1	10/16/2018 03:18	WG1180840
n-Nitrosodimethylamine	ND		0.333	1	10/16/2018 03:18	WG1180840
n-Nitrosodiphenylamine	ND		0.333	1	10/16/2018 03:18	WG1180840
n-Nitrosodi-n-propylamine	ND		0.333	1	10/16/2018 03:18	WG1180840
Phenanthrene	ND		0.0333	1	10/16/2018 03:18	WG1180840
Benzylbutyl phthalate	ND		0.333	1	10/16/2018 03:18	WG1180840
Bis(2-ethylhexyl)phthalate	ND		0.333	1	10/16/2018 03:18	WG1180840
Di-n-butyl phthalate	ND		0.333	1	10/16/2018 03:18	WG1180840
Diethyl phthalate	ND		0.333	1	10/16/2018 03:18	WG1180840
Dimethyl phthalate	ND		0.333	1	10/16/2018 03:18	WG1180840
Di-n-octyl phthalate	ND		0.333	1	10/16/2018 03:18	WG1180840
Pyrene	ND		0.0333	1	10/16/2018 03:18	WG1180840
1,2,4-Trichlorobenzene	ND		0.333	1	10/16/2018 03:18	WG1180840
4-Chloro-3-methylphenol	ND		0.333	1	10/16/2018 03:18	WG1180840
2-Chlorophenol	ND		0.333	1	10/16/2018 03:18	WG1180840
2,4-Dichlorophenol	ND		0.333	1	10/16/2018 03:18	WG1180840
2,4-Dimethylphenol	ND		0.333	1	10/16/2018 03:18	WG1180840
4,6-Dinitro-2-methylphenol	ND		0.333	1	10/16/2018 03:18	WG1180840
2,4-Dinitrophenol	ND	J3	0.333	1	10/16/2018 03:18	WG1180840
2-Nitrophenol	ND		0.333	1	10/16/2018 03:18	WG1180840
4-Nitrophenol	ND		0.333	1	10/16/2018 03:18	WG1180840
Pentachlorophenol	ND		0.333	1	10/16/2018 03:18	WG1180840
Phenol	ND		0.333	1	10/16/2018 03:18	WG1180840
2,4,6-Trichlorophenol	ND		0.333	1	10/16/2018 03:18	WG1180840
(S) 2-Fluorophenol	71.5		12.0-120		10/16/2018 03:18	WG1180840
(S) Phenol-d5	60.4		10.0-120		10/16/2018 03:18	WG1180840
(S) Nitrobenzene-d5	66.4		10.0-122		10/16/2018 03:18	WG1180840
(S) 2-Fluorobiphenyl	64.0		15.0-120		10/16/2018 03:18	WG1180840
(S) 2,4,6-Tribromophenol	65.0		10.0-127		10/16/2018 03:18	WG1180840
(S) p-Terphenyl-d14	62.2		10.0-120		10/16/2018 03:18	WG1180840

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Cyanide	ND		0.250	1	10/18/2018 16:53	WG1182668

Mercury by Method 7471A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0200	1	10/16/2018 11:41	WG1180875

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	3.24		2.00	1	10/16/2018 02:26	WG1180812
Barium	40.7		0.500	1	10/16/2018 02:26	WG1180812
Cadmium	ND		0.500	1	10/16/2018 02:26	WG1180812
Chromium	12.6		1.00	1	10/16/2018 02:26	WG1180812
Lead	5.52		0.500	1	10/16/2018 02:26	WG1180812
Selenium	ND		2.00	1	10/16/2018 02:26	WG1180812
Silver	ND		1.00	1	10/16/2018 02:26	WG1180812

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0250	1	10/16/2018 11:23	WG1181429
Acrylonitrile	ND		0.0125	1	10/16/2018 11:23	WG1181429
Benzene	ND		0.00100	1	10/16/2018 11:23	WG1181429
Bromobenzene	ND		0.0125	1	10/16/2018 11:23	WG1181429
Bromodichloromethane	ND		0.00250	1	10/16/2018 11:23	WG1181429
Bromoform	ND		0.0250	1	10/16/2018 11:23	WG1181429
Bromomethane	ND		0.0125	1	10/16/2018 11:23	WG1181429
n-Butylbenzene	ND		0.0125	1	10/16/2018 11:23	WG1181429
sec-Butylbenzene	ND		0.0125	1	10/16/2018 11:23	WG1181429
tert-Butylbenzene	ND		0.00500	1	10/16/2018 11:23	WG1181429
Carbon tetrachloride	ND		0.00500	1	10/16/2018 11:23	WG1181429
Chlorobenzene	ND	J4	0.00250	1	10/16/2018 11:23	WG1181429
Chlorodibromomethane	ND		0.00250	1	10/16/2018 11:23	WG1181429
Chloroethane	ND		0.00500	1	10/16/2018 11:23	WG1181429
Chloroform	ND		0.00250	1	10/16/2018 11:23	WG1181429
Chloromethane	ND		0.0125	1	10/16/2018 11:23	WG1181429
2-Chlorotoluene	ND		0.00250	1	10/16/2018 11:23	WG1181429
4-Chlorotoluene	ND		0.00500	1	10/16/2018 11:23	WG1181429
1,2-Dibromo-3-Chloropropane	ND		0.0250	1	10/16/2018 11:23	WG1181429
1,2-Dibromoethane	ND		0.00250	1	10/16/2018 11:23	WG1181429
Dibromomethane	ND		0.00500	1	10/16/2018 11:23	WG1181429
1,2-Dichlorobenzene	ND		0.00500	1	10/16/2018 11:23	WG1181429
1,3-Dichlorobenzene	ND		0.00500	1	10/16/2018 11:23	WG1181429
1,4-Dichlorobenzene	ND		0.00500	1	10/16/2018 11:23	WG1181429
Dichlorodifluoromethane	ND		0.00250	1	10/16/2018 11:23	WG1181429
1,1-Dichloroethane	0.0107		0.00250	1	10/16/2018 11:23	WG1181429
1,2-Dichloroethane	ND		0.00250	1	10/16/2018 11:23	WG1181429
1,1-Dichloroethene	ND		0.00250	1	10/16/2018 11:23	WG1181429
cis-1,2-Dichloroethene	0.673		0.00250	1	10/16/2018 11:23	WG1181429
trans-1,2-Dichloroethene	ND		0.00500	1	10/16/2018 11:23	WG1181429
1,2-Dichloropropane	ND		0.00500	1	10/16/2018 11:23	WG1181429
1,1-Dichloropropene	ND		0.00250	1	10/16/2018 11:23	WG1181429
1,3-Dichloropropane	ND		0.00500	1	10/16/2018 11:23	WG1181429

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00250	1	10/16/2018 11:23	WG1181429
trans-1,3-Dichloropropene	ND		0.00500	1	10/16/2018 11:23	WG1181429
2,2-Dichloropropane	ND		0.00250	1	10/16/2018 11:23	WG1181429
Di-isopropyl ether	ND		0.00100	1	10/16/2018 11:23	WG1181429
Ethylbenzene	ND		0.00250	1	10/16/2018 11:23	WG1181429
Hexachloro-1,3-butadiene	ND		0.0250	1	10/16/2018 11:23	WG1181429
Isopropylbenzene	ND		0.00250	1	10/16/2018 11:23	WG1181429
p-Isopropyltoluene	ND		0.00500	1	10/16/2018 11:23	WG1181429
2-Butanone (MEK)	ND		0.0250	1	10/16/2018 11:23	WG1181429
Methylene Chloride	ND		0.0250	1	10/16/2018 11:23	WG1181429
4-Methyl-2-pentanone (MIBK)	ND		0.0250	1	10/16/2018 11:23	WG1181429
Methyl tert-butyl ether	ND		0.00100	1	10/16/2018 11:23	WG1181429
Naphthalene	ND		0.0125	1	10/16/2018 11:23	WG1181429
n-Propylbenzene	ND		0.00500	1	10/16/2018 11:23	WG1181429
Styrene	ND		0.0125	1	10/16/2018 11:23	WG1181429
1,1,1,2-Tetrachloroethane	ND		0.00250	1	10/16/2018 11:23	WG1181429
1,1,2,2-Tetrachloroethane	ND		0.00250	1	10/16/2018 11:23	WG1181429
1,1,2-Trichlorotrifluoroethane	ND		0.00250	1	10/16/2018 11:23	WG1181429
Tetrachloroethene	ND	J4	0.00250	1	10/16/2018 11:23	WG1181429
Toluene	ND		0.00500	1	10/16/2018 11:23	WG1181429
1,2,3-Trichlorobenzene	ND		0.00250	1	10/16/2018 11:23	WG1181429
1,2,4-Trichlorobenzene	ND		0.0125	1	10/16/2018 11:23	WG1181429
1,1,1-Trichloroethane	ND		0.00250	1	10/16/2018 11:23	WG1181429
1,1,2-Trichloroethane	ND		0.00250	1	10/16/2018 11:23	WG1181429
Trichloroethene	0.0956		0.00100	1	10/16/2018 11:23	WG1181429
Trichlorofluoromethane	ND		0.00250	1	10/16/2018 11:23	WG1181429
1,2,3-Trichloropropane	ND		0.0125	1	10/16/2018 11:23	WG1181429
1,2,4-Trimethylbenzene	ND		0.00500	1	10/16/2018 11:23	WG1181429
1,2,3-Trimethylbenzene	ND		0.00500	1	10/16/2018 11:23	WG1181429
1,3,5-Trimethylbenzene	ND		0.00500	1	10/16/2018 11:23	WG1181429
Vinyl chloride	0.0635		0.00250	1	10/16/2018 11:23	WG1181429
Xylenes, Total	ND		0.00650	1	10/16/2018 11:23	WG1181429
(S) Toluene-d8	94.5		75.0-131		10/16/2018 11:23	WG1181429
(S) Dibromofluoromethane	113		65.0-129		10/16/2018 11:23	WG1181429
(S) 4-Bromofluorobenzene	109		67.0-138		10/16/2018 11:23	WG1181429

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	6.98	B	2.50	25	10/16/2018 18:32	WG1181020
(S) a, a, a-Trifluorotoluene(FID)	99.5		77.0-120		10/16/2018 18:32	WG1181020

1 Cp

2 Tc

3 Ss

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	10/16/2018 22:19	WG1181866
Toluene	ND		0.00500	1	10/16/2018 22:19	WG1181866
Ethylbenzene	ND		0.00250	1	10/16/2018 22:19	WG1181866
Total Xylenes	ND		0.00650	1	10/16/2018 22:19	WG1181866
(S) Toluene-d8	120		75.0-131		10/16/2018 22:19	WG1181866
(S) Dibromofluoromethane	98.3		65.0-129		10/16/2018 22:19	WG1181866
(S) a, a, a-Trifluorotoluene	98.5		80.0-120		10/16/2018 22:19	WG1181866
(S) 4-Bromofluorobenzene	101		67.0-138		10/16/2018 22:19	WG1181866

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	4.10		4.00	1	10/16/2018 22:03	WG1180857
(S) o-Terphenyl	74.0		18.0-148		10/16/2018 22:03	WG1180857

9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00600	1	10/16/2018 12:21	WG1181295
Acenaphthene	ND		0.00600	1	10/16/2018 12:21	WG1181295
Acenaphthylene	ND		0.00600	1	10/16/2018 12:21	WG1181295
Benzo(a)anthracene	ND		0.00600	1	10/16/2018 12:21	WG1181295
Benzo(a)pyrene	ND		0.00600	1	10/16/2018 12:21	WG1181295
Benzo(b)fluoranthene	ND		0.00600	1	10/16/2018 12:21	WG1181295
Benzo(g,h,i)perylene	ND		0.00600	1	10/16/2018 12:21	WG1181295
Benzo(k)fluoranthene	ND		0.00600	1	10/16/2018 12:21	WG1181295
Chrysene	ND		0.00600	1	10/16/2018 12:21	WG1181295
Dibenz(a,h)anthracene	ND		0.00600	1	10/16/2018 12:21	WG1181295
Fluoranthene	ND		0.00600	1	10/16/2018 12:21	WG1181295
Fluorene	ND		0.00600	1	10/16/2018 12:21	WG1181295
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	10/16/2018 12:21	WG1181295
Naphthalene	ND		0.0200	1	10/16/2018 12:21	WG1181295
Phenanthrene	ND		0.00600	1	10/16/2018 12:21	WG1181295
Pyrene	ND		0.00600	1	10/16/2018 12:21	WG1181295
1-Methylnaphthalene	ND		0.0200	1	10/16/2018 12:21	WG1181295
2-Methylnaphthalene	ND		0.0200	1	10/16/2018 12:21	WG1181295
2-Chloronaphthalene	ND		0.0200	1	10/16/2018 12:21	WG1181295
(S) p-Terphenyl-d14	36.7		23.0-120		10/16/2018 12:21	WG1181295
(S) Nitrobenzene-d5	77.8		14.0-149		10/16/2018 12:21	WG1181295
(S) 2-Fluorobiphenyl	42.5		34.0-125		10/16/2018 12:21	WG1181295



Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Cyanide	ND		0.250	1	10/18/2018 16:54	WG1182668

Mercury by Method 7471A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	0.0366		0.0200	1	10/16/2018 11:44	WG1180875

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	2.74		2.00	1	10/16/2018 02:28	WG1180812
Barium	84.0		0.500	1	10/16/2018 02:28	WG1180812
Cadmium	ND		0.500	1	10/16/2018 02:28	WG1180812
Chromium	20.6		1.00	1	10/16/2018 02:28	WG1180812
Lead	11.0		0.500	1	10/16/2018 02:28	WG1180812
Selenium	ND		2.00	1	10/16/2018 02:28	WG1180812
Silver	ND		1.00	1	10/16/2018 02:28	WG1180812

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0250	1	10/16/2018 13:22	WG1181654
Acrylonitrile	ND		0.0125	1	10/16/2018 13:22	WG1181654
Benzene	ND		0.00100	1	10/16/2018 13:22	WG1181654
Bromobenzene	ND		0.0125	1	10/16/2018 13:22	WG1181654
Bromodichloromethane	ND		0.00250	1	10/16/2018 13:22	WG1181654
Bromoform	ND		0.0250	1	10/16/2018 13:22	WG1181654
Bromomethane	ND		0.0125	1	10/16/2018 13:22	WG1181654
n-Butylbenzene	ND		0.0125	1	10/16/2018 13:22	WG1181654
sec-Butylbenzene	ND		0.0125	1	10/16/2018 13:22	WG1181654
tert-Butylbenzene	ND		0.00500	1	10/16/2018 13:22	WG1181654
Carbon tetrachloride	ND		0.00500	1	10/16/2018 13:22	WG1181654
Chlorobenzene	ND		0.00250	1	10/16/2018 13:22	WG1181654
Chlorodibromomethane	ND		0.00250	1	10/16/2018 13:22	WG1181654
Chloroethane	ND		0.00500	1	10/16/2018 13:22	WG1181654
Chloroform	ND		0.00250	1	10/16/2018 13:22	WG1181654
Chloromethane	ND		0.0125	1	10/16/2018 13:22	WG1181654
2-Chlorotoluene	ND		0.00250	1	10/16/2018 13:22	WG1181654
4-Chlorotoluene	ND		0.00500	1	10/16/2018 13:22	WG1181654
1,2-Dibromo-3-Chloropropane	ND		0.0250	1	10/16/2018 13:22	WG1181654
1,2-Dibromoethane	ND		0.00250	1	10/16/2018 13:22	WG1181654
Dibromomethane	ND	<u>J4</u>	0.00500	1	10/16/2018 13:22	WG1181654
1,2-Dichlorobenzene	ND		0.00500	1	10/16/2018 13:22	WG1181654
1,3-Dichlorobenzene	ND		0.00500	1	10/16/2018 13:22	WG1181654
1,4-Dichlorobenzene	ND		0.00500	1	10/16/2018 13:22	WG1181654
Dichlorodifluoromethane	ND		0.00250	1	10/16/2018 13:22	WG1181654
1,1-Dichloroethane	ND		0.00250	1	10/16/2018 13:22	WG1181654
1,2-Dichloroethane	ND		0.00250	1	10/16/2018 13:22	WG1181654
1,1-Dichloroethene	ND		0.00250	1	10/16/2018 13:22	WG1181654
cis-1,2-Dichloroethene	ND		0.00250	1	10/16/2018 13:22	WG1181654
trans-1,2-Dichloroethene	ND		0.00500	1	10/16/2018 13:22	WG1181654
1,2-Dichloropropane	ND		0.00500	1	10/16/2018 13:22	WG1181654
1,1-Dichloropropene	ND		0.00250	1	10/16/2018 13:22	WG1181654
1,3-Dichloropropane	ND		0.00500	1	10/16/2018 13:22	WG1181654

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00250	1	10/16/2018 13:22	WG1181654
trans-1,3-Dichloropropene	ND		0.00500	1	10/16/2018 13:22	WG1181654
2,2-Dichloropropane	ND		0.00250	1	10/16/2018 13:22	WG1181654
Di-isopropyl ether	ND		0.00100	1	10/16/2018 13:22	WG1181654
Ethylbenzene	ND		0.00250	1	10/16/2018 13:22	WG1181654
Hexachloro-1,3-butadiene	ND		0.0250	1	10/16/2018 13:22	WG1181654
Isopropylbenzene	ND		0.00250	1	10/16/2018 13:22	WG1181654
p-Isopropyltoluene	ND		0.00500	1	10/16/2018 13:22	WG1181654
2-Butanone (MEK)	ND		0.0250	1	10/16/2018 13:22	WG1181654
Methylene Chloride	ND		0.0250	1	10/16/2018 13:22	WG1181654
4-Methyl-2-pentanone (MIBK)	ND		0.0250	1	10/16/2018 13:22	WG1181654
Methyl tert-butyl ether	ND		0.00100	1	10/16/2018 13:22	WG1181654
Naphthalene	ND		0.0125	1	10/16/2018 13:22	WG1181654
n-Propylbenzene	ND		0.00500	1	10/16/2018 13:22	WG1181654
Styrene	ND		0.0125	1	10/16/2018 13:22	WG1181654
1,1,1,2-Tetrachloroethane	ND		0.00250	1	10/16/2018 13:22	WG1181654
1,1,2,2-Tetrachloroethane	ND	J4	0.00250	1	10/16/2018 13:22	WG1181654
1,1,2-Trichlorotrifluoroethane	ND		0.00250	1	10/16/2018 13:22	WG1181654
Tetrachloroethene	ND		0.00250	1	10/16/2018 13:22	WG1181654
Toluene	ND		0.00500	1	10/16/2018 13:22	WG1181654
1,2,3-Trichlorobenzene	ND		0.00250	1	10/16/2018 13:22	WG1181654
1,2,4-Trichlorobenzene	ND		0.0125	1	10/16/2018 13:22	WG1181654
1,1,1-Trichloroethane	ND		0.00250	1	10/16/2018 13:22	WG1181654
1,1,2-Trichloroethane	ND	J4	0.00250	1	10/16/2018 13:22	WG1181654
Trichloroethene	ND		0.00100	1	10/16/2018 13:22	WG1181654
Trichlorofluoromethane	ND		0.00250	1	10/16/2018 13:22	WG1181654
1,2,3-Trichloropropane	ND		0.0125	1	10/16/2018 13:22	WG1181654
1,2,4-Trimethylbenzene	ND		0.00500	1	10/16/2018 13:22	WG1181654
1,2,3-Trimethylbenzene	ND		0.00500	1	10/16/2018 13:22	WG1181654
1,3,5-Trimethylbenzene	ND		0.00500	1	10/16/2018 13:22	WG1181654
Vinyl chloride	ND		0.00250	1	10/16/2018 13:22	WG1181654
Xylenes, Total	ND		0.00650	1	10/16/2018 13:22	WG1181654
(S) Toluene-d8	119		75.0-131		10/16/2018 13:22	WG1181654
(S) Dibromofluoromethane	75.9		65.0-129		10/16/2018 13:22	WG1181654
(S) 4-Bromofluorobenzene	96.1		67.0-138		10/16/2018 13:22	WG1181654

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Cyanide	ND		0.250	1	10/18/2018 16:55	WG1182668

Mercury by Method 7471A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0200	1	10/16/2018 11:47	WG1180875

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		2.00	1	10/16/2018 02:31	WG1180812
Barium	94.2		0.500	1	10/16/2018 02:31	WG1180812
Cadmium	ND		0.500	1	10/16/2018 02:31	WG1180812
Chromium	12.0		1.00	1	10/16/2018 02:31	WG1180812
Lead	7.44		0.500	1	10/16/2018 02:31	WG1180812
Selenium	ND		2.00	1	10/16/2018 02:31	WG1180812
Silver	ND		1.00	1	10/16/2018 02:31	WG1180812

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0250	1	10/16/2018 13:42	WG1181654
Acrylonitrile	ND		0.0125	1	10/16/2018 13:42	WG1181654
Benzene	ND		0.00100	1	10/16/2018 13:42	WG1181654
Bromobenzene	ND		0.0125	1	10/16/2018 13:42	WG1181654
Bromodichloromethane	ND		0.00250	1	10/16/2018 13:42	WG1181654
Bromoform	ND		0.0250	1	10/16/2018 13:42	WG1181654
Bromomethane	ND		0.0125	1	10/16/2018 13:42	WG1181654
n-Butylbenzene	ND		0.0125	1	10/16/2018 13:42	WG1181654
sec-Butylbenzene	ND		0.0125	1	10/16/2018 13:42	WG1181654
tert-Butylbenzene	ND		0.00500	1	10/16/2018 13:42	WG1181654
Carbon tetrachloride	ND		0.00500	1	10/16/2018 13:42	WG1181654
Chlorobenzene	ND		0.00250	1	10/16/2018 13:42	WG1181654
Chlorodibromomethane	ND		0.00250	1	10/16/2018 13:42	WG1181654
Chloroethane	ND		0.00500	1	10/16/2018 13:42	WG1181654
Chloroform	ND		0.00250	1	10/16/2018 13:42	WG1181654
Chloromethane	ND		0.0125	1	10/16/2018 13:42	WG1181654
2-Chlorotoluene	ND		0.00250	1	10/16/2018 13:42	WG1181654
4-Chlorotoluene	ND		0.00500	1	10/16/2018 13:42	WG1181654
1,2-Dibromo-3-Chloropropane	ND		0.0250	1	10/16/2018 13:42	WG1181654
1,2-Dibromoethane	ND		0.00250	1	10/16/2018 13:42	WG1181654
Dibromomethane	ND	<u>J4</u>	0.00500	1	10/16/2018 13:42	WG1181654
1,2-Dichlorobenzene	ND		0.00500	1	10/16/2018 13:42	WG1181654
1,3-Dichlorobenzene	ND		0.00500	1	10/16/2018 13:42	WG1181654
1,4-Dichlorobenzene	ND		0.00500	1	10/16/2018 13:42	WG1181654
Dichlorodifluoromethane	ND		0.00250	1	10/16/2018 13:42	WG1181654
1,1-Dichloroethane	ND		0.00250	1	10/16/2018 13:42	WG1181654
1,2-Dichloroethane	ND		0.00250	1	10/16/2018 13:42	WG1181654
1,1-Dichloroethene	ND		0.00250	1	10/16/2018 13:42	WG1181654
cis-1,2-Dichloroethene	ND		0.00250	1	10/16/2018 13:42	WG1181654
trans-1,2-Dichloroethene	ND		0.00500	1	10/16/2018 13:42	WG1181654
1,2-Dichloropropane	ND		0.00500	1	10/16/2018 13:42	WG1181654
1,1-Dichloropropene	ND		0.00250	1	10/16/2018 13:42	WG1181654
1,3-Dichloropropane	ND		0.00500	1	10/16/2018 13:42	WG1181654

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00250	1	10/16/2018 13:42	WG1181654
trans-1,3-Dichloropropene	ND		0.00500	1	10/16/2018 13:42	WG1181654
2,2-Dichloropropane	ND		0.00250	1	10/16/2018 13:42	WG1181654
Di-isopropyl ether	ND		0.00100	1	10/16/2018 13:42	WG1181654
Ethylbenzene	ND		0.00250	1	10/16/2018 13:42	WG1181654
Hexachloro-1,3-butadiene	ND		0.0250	1	10/16/2018 13:42	WG1181654
Isopropylbenzene	ND		0.00250	1	10/16/2018 13:42	WG1181654
p-Isopropyltoluene	ND		0.00500	1	10/16/2018 13:42	WG1181654
2-Butanone (MEK)	ND		0.0250	1	10/16/2018 13:42	WG1181654
Methylene Chloride	ND		0.0250	1	10/16/2018 13:42	WG1181654
4-Methyl-2-pentanone (MIBK)	ND		0.0250	1	10/16/2018 13:42	WG1181654
Methyl tert-butyl ether	ND		0.00100	1	10/16/2018 13:42	WG1181654
Naphthalene	ND		0.0125	1	10/16/2018 13:42	WG1181654
n-Propylbenzene	ND		0.00500	1	10/16/2018 13:42	WG1181654
Styrene	ND		0.0125	1	10/16/2018 13:42	WG1181654
1,1,1,2-Tetrachloroethane	ND		0.00250	1	10/16/2018 13:42	WG1181654
1,1,2,2-Tetrachloroethane	ND	J4	0.00250	1	10/16/2018 13:42	WG1181654
1,1,2-Trichlorotrifluoroethane	ND		0.00250	1	10/16/2018 13:42	WG1181654
Tetrachloroethene	ND		0.00250	1	10/16/2018 13:42	WG1181654
Toluene	ND		0.00500	1	10/16/2018 13:42	WG1181654
1,2,3-Trichlorobenzene	ND		0.00250	1	10/16/2018 13:42	WG1181654
1,2,4-Trichlorobenzene	ND		0.0125	1	10/16/2018 13:42	WG1181654
1,1,1-Trichloroethane	ND		0.00250	1	10/16/2018 13:42	WG1181654
1,1,2-Trichloroethane	ND	J4	0.00250	1	10/16/2018 13:42	WG1181654
Trichloroethene	ND		0.00100	1	10/16/2018 13:42	WG1181654
Trichlorofluoromethane	ND		0.00250	1	10/16/2018 13:42	WG1181654
1,2,3-Trichloropropane	ND		0.0125	1	10/16/2018 13:42	WG1181654
1,2,4-Trimethylbenzene	ND		0.00500	1	10/16/2018 13:42	WG1181654
1,2,3-Trimethylbenzene	ND		0.00500	1	10/16/2018 13:42	WG1181654
1,3,5-Trimethylbenzene	ND		0.00500	1	10/16/2018 13:42	WG1181654
Vinyl chloride	ND		0.00250	1	10/16/2018 13:42	WG1181654
Xylenes, Total	ND		0.00650	1	10/16/2018 13:42	WG1181654
(S) Toluene-d8	117		75.0-131		10/16/2018 13:42	WG1181654
(S) Dibromofluoromethane	77.4		65.0-129		10/16/2018 13:42	WG1181654
(S) 4-Bromofluorobenzene	99.1		67.0-138		10/16/2018 13:42	WG1181654

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Cyanide	ND		0.250	1	10/20/2018 12:35	WG1183282

Mercury by Method 7471A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0200	1	10/16/2018 11:54	WG1180875

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	4.08		2.00	1	10/16/2018 02:39	WG1180812
Barium	29.1		0.500	1	10/16/2018 02:39	WG1180812
Cadmium	ND		0.500	1	10/16/2018 02:39	WG1180812
Chromium	27.4		1.00	1	10/16/2018 02:39	WG1180812
Lead	7.63		0.500	1	10/16/2018 02:39	WG1180812
Selenium	ND		2.00	1	10/16/2018 02:39	WG1180812
Silver	ND		1.00	1	10/16/2018 02:39	WG1180812

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0250	1	10/16/2018 14:02	WG1181654
Acrylonitrile	ND		0.0125	1	10/16/2018 14:02	WG1181654
Benzene	ND		0.00100	1	10/16/2018 14:02	WG1181654
Bromobenzene	ND		0.0125	1	10/16/2018 14:02	WG1181654
Bromodichloromethane	ND		0.00250	1	10/16/2018 14:02	WG1181654
Bromoform	ND		0.0250	1	10/16/2018 14:02	WG1181654
Bromomethane	ND		0.0125	1	10/16/2018 14:02	WG1181654
n-Butylbenzene	ND		0.0125	1	10/16/2018 14:02	WG1181654
sec-Butylbenzene	ND		0.0125	1	10/16/2018 14:02	WG1181654
tert-Butylbenzene	ND		0.00500	1	10/16/2018 14:02	WG1181654
Carbon tetrachloride	ND		0.00500	1	10/16/2018 14:02	WG1181654
Chlorobenzene	ND		0.00250	1	10/16/2018 14:02	WG1181654
Chlorodibromomethane	ND		0.00250	1	10/16/2018 14:02	WG1181654
Chloroethane	ND		0.00500	1	10/16/2018 14:02	WG1181654
Chloroform	ND		0.00250	1	10/16/2018 14:02	WG1181654
Chloromethane	ND		0.0125	1	10/16/2018 14:02	WG1181654
2-Chlorotoluene	ND		0.00250	1	10/16/2018 14:02	WG1181654
4-Chlorotoluene	ND		0.00500	1	10/16/2018 14:02	WG1181654
1,2-Dibromo-3-Chloropropane	ND		0.0250	1	10/16/2018 14:02	WG1181654
1,2-Dibromoethane	ND		0.00250	1	10/16/2018 14:02	WG1181654
Dibromomethane	ND	<u>J4</u>	0.00500	1	10/16/2018 14:02	WG1181654
1,2-Dichlorobenzene	ND		0.00500	1	10/16/2018 14:02	WG1181654
1,3-Dichlorobenzene	ND		0.00500	1	10/16/2018 14:02	WG1181654
1,4-Dichlorobenzene	ND		0.00500	1	10/16/2018 14:02	WG1181654
Dichlorodifluoromethane	ND		0.00250	1	10/16/2018 14:02	WG1181654
1,1-Dichloroethane	ND		0.00250	1	10/16/2018 14:02	WG1181654
1,2-Dichloroethane	ND		0.00250	1	10/16/2018 14:02	WG1181654
1,1-Dichloroethene	ND		0.00250	1	10/16/2018 14:02	WG1181654
cis-1,2-Dichloroethene	ND		0.00250	1	10/16/2018 14:02	WG1181654
trans-1,2-Dichloroethene	ND		0.00500	1	10/16/2018 14:02	WG1181654
1,2-Dichloropropane	ND		0.00500	1	10/16/2018 14:02	WG1181654
1,1-Dichloropropene	ND		0.00250	1	10/16/2018 14:02	WG1181654
1,3-Dichloropropane	ND		0.00500	1	10/16/2018 14:02	WG1181654

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00250	1	10/16/2018 14:02	WG1181654
trans-1,3-Dichloropropene	ND		0.00500	1	10/16/2018 14:02	WG1181654
2,2-Dichloropropane	ND		0.00250	1	10/16/2018 14:02	WG1181654
Di-isopropyl ether	ND		0.00100	1	10/16/2018 14:02	WG1181654
Ethylbenzene	ND		0.00250	1	10/16/2018 14:02	WG1181654
Hexachloro-1,3-butadiene	ND		0.0250	1	10/16/2018 14:02	WG1181654
Isopropylbenzene	ND		0.00250	1	10/16/2018 14:02	WG1181654
p-Isopropyltoluene	ND		0.00500	1	10/16/2018 14:02	WG1181654
2-Butanone (MEK)	ND		0.0250	1	10/16/2018 14:02	WG1181654
Methylene Chloride	ND		0.0250	1	10/16/2018 14:02	WG1181654
4-Methyl-2-pentanone (MIBK)	ND		0.0250	1	10/16/2018 14:02	WG1181654
Methyl tert-butyl ether	ND		0.00100	1	10/16/2018 14:02	WG1181654
Naphthalene	ND		0.0125	1	10/16/2018 14:02	WG1181654
n-Propylbenzene	ND		0.00500	1	10/16/2018 14:02	WG1181654
Styrene	ND		0.0125	1	10/16/2018 14:02	WG1181654
1,1,1,2-Tetrachloroethane	ND		0.00250	1	10/16/2018 14:02	WG1181654
1,1,2,2-Tetrachloroethane	ND	J4	0.00250	1	10/16/2018 14:02	WG1181654
1,1,2-Trichlorotrifluoroethane	ND		0.00250	1	10/16/2018 14:02	WG1181654
Tetrachloroethene	ND		0.00250	1	10/16/2018 14:02	WG1181654
Toluene	ND		0.00500	1	10/16/2018 14:02	WG1181654
1,2,3-Trichlorobenzene	ND		0.00250	1	10/16/2018 14:02	WG1181654
1,2,4-Trichlorobenzene	ND		0.0125	1	10/16/2018 14:02	WG1181654
1,1,1-Trichloroethane	ND		0.00250	1	10/16/2018 14:02	WG1181654
1,1,2-Trichloroethane	ND	J4	0.00250	1	10/16/2018 14:02	WG1181654
Trichloroethene	ND		0.00100	1	10/16/2018 14:02	WG1181654
Trichlorofluoromethane	ND		0.00250	1	10/16/2018 14:02	WG1181654
1,2,3-Trichloropropane	ND		0.0125	1	10/16/2018 14:02	WG1181654
1,2,4-Trimethylbenzene	ND		0.00500	1	10/16/2018 14:02	WG1181654
1,2,3-Trimethylbenzene	ND		0.00500	1	10/16/2018 14:02	WG1181654
1,3,5-Trimethylbenzene	ND		0.00500	1	10/16/2018 14:02	WG1181654
Vinyl chloride	ND		0.00250	1	10/16/2018 14:02	WG1181654
Xylenes, Total	ND		0.00650	1	10/16/2018 14:02	WG1181654
(S) Toluene-d8	118		75.0-131		10/16/2018 14:02	WG1181654
(S) Dibromofluoromethane	78.0		65.0-129		10/16/2018 14:02	WG1181654
(S) 4-Bromofluorobenzene	105		67.0-138		10/16/2018 14:02	WG1181654

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Acetone	ND		0.0250	1	10/17/2018 02:16	WG1181850
Acrylonitrile	ND		0.0125	1	10/17/2018 02:16	WG1181850
Benzene	ND		0.00100	1	10/17/2018 02:16	WG1181850
Bromobenzene	ND		0.0125	1	10/17/2018 02:16	WG1181850
Bromodichloromethane	ND		0.00250	1	10/17/2018 02:16	WG1181850
Bromoform	ND		0.0250	1	10/17/2018 02:16	WG1181850
Bromomethane	ND		0.0125	1	10/17/2018 02:16	WG1181850
n-Butylbenzene	ND		0.0125	1	10/17/2018 02:16	WG1181850
sec-Butylbenzene	ND		0.0125	1	10/17/2018 02:16	WG1181850
tert-Butylbenzene	ND		0.00500	1	10/17/2018 02:16	WG1181850
Carbon tetrachloride	ND		0.00500	1	10/17/2018 02:16	WG1181850
Chlorobenzene	ND		0.00250	1	10/17/2018 02:16	WG1181850
Chlorodibromomethane	ND		0.00250	1	10/17/2018 02:16	WG1181850
Chloroethane	ND		0.00500	1	10/17/2018 02:16	WG1181850
Chloroform	ND		0.00250	1	10/17/2018 02:16	WG1181850
Chloromethane	ND		0.0125	1	10/17/2018 02:16	WG1181850
2-Chlorotoluene	ND		0.00250	1	10/17/2018 02:16	WG1181850
4-Chlorotoluene	ND		0.00500	1	10/17/2018 02:16	WG1181850
1,2-Dibromo-3-Chloropropane	ND		0.0250	1	10/17/2018 02:16	WG1181850
1,2-Dibromoethane	ND		0.00250	1	10/17/2018 02:16	WG1181850
Dibromomethane	ND		0.00500	1	10/17/2018 02:16	WG1181850
1,2-Dichlorobenzene	ND		0.00500	1	10/17/2018 02:16	WG1181850
1,3-Dichlorobenzene	ND		0.00500	1	10/17/2018 02:16	WG1181850
1,4-Dichlorobenzene	ND		0.00500	1	10/17/2018 02:16	WG1181850
Dichlorodifluoromethane	ND		0.00250	1	10/17/2018 02:16	WG1181850
1,1-Dichloroethane	ND		0.00250	1	10/17/2018 02:16	WG1181850
1,2-Dichloroethane	ND		0.00250	1	10/17/2018 02:16	WG1181850
1,1-Dichloroethene	ND		0.00250	1	10/17/2018 02:16	WG1181850
cis-1,2-Dichloroethene	0.186		0.00250	1	10/17/2018 02:16	WG1181850
trans-1,2-Dichloroethene	ND		0.00500	1	10/17/2018 02:16	WG1181850
1,2-Dichloropropane	ND		0.00500	1	10/17/2018 02:16	WG1181850
1,1-Dichloropropene	ND		0.00250	1	10/17/2018 02:16	WG1181850
1,3-Dichloropropane	ND		0.00500	1	10/17/2018 02:16	WG1181850
cis-1,3-Dichloropropene	ND		0.00250	1	10/17/2018 02:16	WG1181850
trans-1,3-Dichloropropene	ND		0.00500	1	10/17/2018 02:16	WG1181850
2,2-Dichloropropane	ND		0.00250	1	10/17/2018 02:16	WG1181850
Di-isopropyl ether	ND		0.00100	1	10/17/2018 02:16	WG1181850
Ethylbenzene	ND		0.00250	1	10/17/2018 02:16	WG1181850
Hexachloro-1,3-butadiene	ND		0.0250	1	10/17/2018 02:16	WG1181850
Isopropylbenzene	ND		0.00250	1	10/17/2018 02:16	WG1181850
p-Isopropyltoluene	ND		0.00500	1	10/17/2018 02:16	WG1181850
2-Butanone (MEK)	ND		0.0250	1	10/17/2018 02:16	WG1181850
Methylene Chloride	ND		0.0250	1	10/17/2018 02:16	WG1181850
4-Methyl-2-pentanone (MIBK)	ND		0.0250	1	10/17/2018 02:16	WG1181850
Methyl tert-butyl ether	ND		0.00100	1	10/17/2018 02:16	WG1181850
Naphthalene	ND		0.0125	1	10/17/2018 02:16	WG1181850
n-Propylbenzene	ND		0.00500	1	10/17/2018 02:16	WG1181850
Styrene	ND		0.0125	1	10/17/2018 02:16	WG1181850
1,1,1,2-Tetrachloroethane	ND		0.00250	1	10/17/2018 02:16	WG1181850
1,1,2,2-Tetrachloroethane	ND		0.00250	1	10/17/2018 02:16	WG1181850
1,1,2-Trichlorotrifluoroethane	ND		0.00250	1	10/17/2018 02:16	WG1181850
Tetrachloroethene	ND	J4	0.00250	1	10/17/2018 02:16	WG1181850
Toluene	ND		0.00500	1	10/17/2018 02:16	WG1181850
1,2,3-Trichlorobenzene	ND		0.00250	1	10/17/2018 02:16	WG1181850
1,2,4-Trichlorobenzene	ND		0.0125	1	10/17/2018 02:16	WG1181850
1,1,1-Trichloroethane	ND		0.00250	1	10/17/2018 02:16	WG1181850

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Collected date/time: 10/09/18 00:00

L1034216

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
1,1,2-Trichloroethane	ND	J4	0.00250	1	10/17/2018 02:16	WG1181850
Trichloroethene	0.00324		0.00100	1	10/17/2018 02:16	WG1181850
Trichlorofluoromethane	ND		0.00250	1	10/17/2018 02:16	WG1181850
1,2,3-Trichloropropane	ND		0.0125	1	10/17/2018 02:16	WG1181850
1,2,4-Trimethylbenzene	ND	J4	0.00500	1	10/17/2018 02:16	WG1181850
1,2,3-Trimethylbenzene	ND		0.00500	1	10/17/2018 02:16	WG1181850
1,3,5-Trimethylbenzene	ND		0.00500	1	10/17/2018 02:16	WG1181850
Vinyl chloride	ND		0.00250	1	10/17/2018 02:16	WG1181850
Xylenes, Total	ND		0.00650	1	10/17/2018 02:16	WG1181850
(S) Toluene-d8	117		75.0-131		10/17/2018 02:16	WG1181850
(S) Dibromofluoromethane	79.6		65.0-129		10/17/2018 02:16	WG1181850
(S) 4-Bromofluorobenzene	104		67.0-138		10/17/2018 02:16	WG1181850

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.00500	1	10/19/2018 13:13	WG1183281

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	10/15/2018 13:54	WG1180340

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Arsenic	ND		0.0100	1	10/17/2018 00:33	WG1180204
Barium	0.147		0.00500	1	10/17/2018 00:33	WG1180204
Cadmium	ND		0.00200	1	10/17/2018 00:33	WG1180204
Chromium	ND		0.0100	1	10/17/2018 00:33	WG1180204
Lead	ND		0.00500	1	10/17/2018 00:33	WG1180204
Selenium	ND		0.0100	1	10/17/2018 00:33	WG1180204
Silver	ND		0.00500	1	10/17/2018 00:33	WG1180204

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Acetone	ND		0.0500	1	10/13/2018 04:48	WG1180358
Acrolein	ND		0.0500	1	10/13/2018 04:48	WG1180358
Acrylonitrile	ND		0.0100	1	10/13/2018 04:48	WG1180358
Benzene	ND		0.00100	1	10/13/2018 04:48	WG1180358
Bromobenzene	ND		0.00100	1	10/13/2018 04:48	WG1180358
Bromodichloromethane	ND		0.00100	1	10/13/2018 04:48	WG1180358
Bromoform	ND		0.00100	1	10/13/2018 04:48	WG1180358
Bromomethane	ND		0.00500	1	10/13/2018 04:48	WG1180358
n-Butylbenzene	ND		0.00100	1	10/13/2018 04:48	WG1180358
sec-Butylbenzene	ND		0.00100	1	10/13/2018 04:48	WG1180358
tert-Butylbenzene	ND		0.00100	1	10/13/2018 04:48	WG1180358
Carbon tetrachloride	ND		0.00100	1	10/13/2018 04:48	WG1180358
Chlorobenzene	ND		0.00100	1	10/13/2018 04:48	WG1180358
Chlorodibromomethane	ND		0.00100	1	10/13/2018 04:48	WG1180358
Chloroethane	ND		0.00500	1	10/13/2018 04:48	WG1180358
Chloroform	ND		0.00500	1	10/13/2018 04:48	WG1180358
Chloromethane	ND		0.00250	1	10/13/2018 04:48	WG1180358
2-Chlorotoluene	ND		0.00100	1	10/13/2018 04:48	WG1180358
4-Chlorotoluene	ND		0.00100	1	10/13/2018 04:48	WG1180358
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	10/13/2018 04:48	WG1180358
1,2-Dibromoethane	ND		0.00100	1	10/13/2018 04:48	WG1180358
Dibromomethane	ND		0.00100	1	10/13/2018 04:48	WG1180358
1,2-Dichlorobenzene	ND		0.00100	1	10/13/2018 04:48	WG1180358
1,3-Dichlorobenzene	ND		0.00100	1	10/13/2018 04:48	WG1180358
1,4-Dichlorobenzene	ND		0.00100	1	10/13/2018 04:48	WG1180358
Dichlorodifluoromethane	ND		0.00500	1	10/13/2018 04:48	WG1180358
1,1-Dichloroethane	ND		0.00100	1	10/13/2018 04:48	WG1180358
1,2-Dichloroethane	ND		0.00100	1	10/13/2018 04:48	WG1180358
1,1-Dichloroethene	ND		0.00100	1	10/13/2018 04:48	WG1180358
cis-1,2-Dichloroethene	ND		0.00100	1	10/13/2018 04:48	WG1180358
trans-1,2-Dichloroethene	ND		0.00100	1	10/13/2018 04:48	WG1180358
1,2-Dichloropropane	ND		0.00100	1	10/13/2018 04:48	WG1180358
1,1-Dichloropropene	ND		0.00100	1	10/13/2018 04:48	WG1180358

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 10/10/18 09:49

L1034216

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,3-Dichloropropane	ND		0.00100	1	10/13/2018 04:48	WG1180358
cis-1,3-Dichloropropene	ND		0.00100	1	10/13/2018 04:48	WG1180358
trans-1,3-Dichloropropene	ND		0.00100	1	10/13/2018 04:48	WG1180358
2,2-Dichloropropane	ND		0.00100	1	10/13/2018 04:48	WG1180358
Di-isopropyl ether	ND		0.00100	1	10/13/2018 04:48	WG1180358
Ethylbenzene	ND		0.00100	1	10/13/2018 04:48	WG1180358
Hexachloro-1,3-butadiene	ND		0.00100	1	10/13/2018 04:48	WG1180358
Isopropylbenzene	ND		0.00100	1	10/13/2018 04:48	WG1180358
p-Isopropyltoluene	ND		0.00100	1	10/13/2018 04:48	WG1180358
2-Butanone (MEK)	ND		0.0100	1	10/13/2018 04:48	WG1180358
Methylene Chloride	ND		0.00500	1	10/13/2018 04:48	WG1180358
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	10/13/2018 04:48	WG1180358
Methyl tert-butyl ether	ND		0.00100	1	10/13/2018 04:48	WG1180358
Naphthalene	ND		0.00500	1	10/13/2018 04:48	WG1180358
n-Propylbenzene	ND		0.00100	1	10/13/2018 04:48	WG1180358
Styrene	ND		0.00100	1	10/13/2018 04:48	WG1180358
1,1,1,2-Tetrachloroethane	ND		0.00100	1	10/13/2018 04:48	WG1180358
1,1,2,2-Tetrachloroethane	ND		0.00100	1	10/13/2018 04:48	WG1180358
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	10/13/2018 04:48	WG1180358
Tetrachloroethene	ND		0.00100	1	10/13/2018 04:48	WG1180358
Toluene	ND		0.00100	1	10/13/2018 04:48	WG1180358
1,2,3-Trichlorobenzene	ND		0.00100	1	10/13/2018 04:48	WG1180358
1,2,4-Trichlorobenzene	ND		0.00100	1	10/13/2018 04:48	WG1180358
1,1,1-Trichloroethane	ND		0.00100	1	10/13/2018 04:48	WG1180358
1,1,2-Trichloroethane	ND		0.00100	1	10/13/2018 04:48	WG1180358
Trichloroethene	ND		0.00100	1	10/13/2018 04:48	WG1180358
Trichlorofluoromethane	ND		0.00500	1	10/13/2018 04:48	WG1180358
1,2,3-Trichloropropane	ND		0.00250	1	10/13/2018 04:48	WG1180358
1,2,4-Trimethylbenzene	ND		0.00100	1	10/13/2018 04:48	WG1180358
1,2,3-Trimethylbenzene	ND		0.00100	1	10/13/2018 04:48	WG1180358
1,3,5-Trimethylbenzene	ND		0.00100	1	10/13/2018 04:48	WG1180358
Vinyl chloride	ND		0.00100	1	10/13/2018 04:48	WG1180358
Xylenes, Total	ND		0.00300	1	10/13/2018 04:48	WG1180358
(S) Toluene-d8	102		80.0-120		10/13/2018 04:48	WG1180358
(S) Dibromofluoromethane	97.0		75.0-120		10/13/2018 04:48	WG1180358
(S) 4-Bromofluorobenzene	97.9		77.0-126		10/13/2018 04:48	WG1180358

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.00500	1	10/19/2018 13:14	WG1183281

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	10/15/2018 13:57	WG1180340

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Arsenic	ND		0.0100	1	10/17/2018 00:35	WG1180204
Barium	0.138		0.00500	1	10/17/2018 00:35	WG1180204
Cadmium	ND		0.00200	1	10/17/2018 00:35	WG1180204
Chromium	ND		0.0100	1	10/17/2018 00:35	WG1180204
Lead	ND		0.00500	1	10/17/2018 00:35	WG1180204
Selenium	ND		0.0100	1	10/17/2018 00:35	WG1180204
Silver	ND		0.00500	1	10/17/2018 00:35	WG1180204

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Acetone	ND		0.0500	1	10/17/2018 20:06	WG1182275
Acrolein	ND		0.0500	1	10/17/2018 20:06	WG1182275
Acrylonitrile	ND		0.0100	1	10/17/2018 20:06	WG1182275
Benzene	ND		0.00100	1	10/17/2018 20:06	WG1182275
Bromobenzene	ND		0.00100	1	10/17/2018 20:06	WG1182275
Bromodichloromethane	ND		0.00100	1	10/17/2018 20:06	WG1182275
Bromoform	ND		0.00100	1	10/17/2018 20:06	WG1182275
Bromomethane	ND		0.00500	1	10/17/2018 20:06	WG1182275
n-Butylbenzene	0.00183		0.00100	1	10/17/2018 20:06	WG1182275
sec-Butylbenzene	ND		0.00100	1	10/17/2018 20:06	WG1182275
tert-Butylbenzene	ND		0.00100	1	10/17/2018 20:06	WG1182275
Carbon tetrachloride	ND		0.00100	1	10/17/2018 20:06	WG1182275
Chlorobenzene	ND		0.00100	1	10/17/2018 20:06	WG1182275
Chlorodibromomethane	ND		0.00100	1	10/17/2018 20:06	WG1182275
Chloroethane	ND		0.00500	1	10/17/2018 20:06	WG1182275
Chloroform	ND		0.00500	1	10/17/2018 20:06	WG1182275
Chloromethane	ND		0.00250	1	10/17/2018 20:06	WG1182275
2-Chlorotoluene	ND		0.00100	1	10/17/2018 20:06	WG1182275
4-Chlorotoluene	ND		0.00100	1	10/17/2018 20:06	WG1182275
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	10/17/2018 20:06	WG1182275
1,2-Dibromoethane	ND		0.00100	1	10/17/2018 20:06	WG1182275
Dibromomethane	ND		0.00100	1	10/17/2018 20:06	WG1182275
1,2-Dichlorobenzene	ND		0.00100	1	10/17/2018 20:06	WG1182275
1,3-Dichlorobenzene	ND		0.00100	1	10/17/2018 20:06	WG1182275
1,4-Dichlorobenzene	ND		0.00100	1	10/17/2018 20:06	WG1182275
Dichlorodifluoromethane	ND		0.00500	1	10/17/2018 20:06	WG1182275
1,1-Dichloroethane	ND		0.00100	1	10/17/2018 20:06	WG1182275
1,2-Dichloroethane	ND		0.00100	1	10/17/2018 20:06	WG1182275
1,1-Dichloroethene	ND		0.00100	1	10/17/2018 20:06	WG1182275
cis-1,2-Dichloroethene	0.342		0.0200	20	10/18/2018 13:32	WG1182835
trans-1,2-Dichloroethene	0.00408		0.00100	1	10/17/2018 20:06	WG1182275
1,2-Dichloropropane	ND		0.00100	1	10/17/2018 20:06	WG1182275
1,1-Dichloropropene	ND		0.00100	1	10/17/2018 20:06	WG1182275

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 10/10/18 10:53

L1034216

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,3-Dichloropropane	ND		0.00100	1	10/17/2018 20:06	WG1182275
cis-1,3-Dichloropropene	ND		0.00100	1	10/17/2018 20:06	WG1182275
trans-1,3-Dichloropropene	ND		0.00100	1	10/17/2018 20:06	WG1182275
2,2-Dichloropropane	ND		0.00100	1	10/17/2018 20:06	WG1182275
Di-isopropyl ether	ND		0.00100	1	10/17/2018 20:06	WG1182275
Ethylbenzene	0.129		0.00100	1	10/17/2018 20:06	WG1182275
Hexachloro-1,3-butadiene	ND		0.00100	1	10/17/2018 20:06	WG1182275
Isopropylbenzene	0.0177		0.00100	1	10/17/2018 20:06	WG1182275
p-Isopropyltoluene	0.0138		0.00100	1	10/17/2018 20:06	WG1182275
2-Butanone (MEK)	ND		0.0100	1	10/17/2018 20:06	WG1182275
Methylene Chloride	ND		0.00500	1	10/17/2018 20:06	WG1182275
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	10/17/2018 20:06	WG1182275
Methyl tert-butyl ether	ND		0.00100	1	10/17/2018 20:06	WG1182275
Naphthalene	0.00537		0.00500	1	10/17/2018 20:06	WG1182275
n-Propylbenzene	0.0411		0.00100	1	10/17/2018 20:06	WG1182275
Styrene	ND		0.00100	1	10/17/2018 20:06	WG1182275
1,1,1,2-Tetrachloroethane	ND		0.00100	1	10/17/2018 20:06	WG1182275
1,1,2,2-Tetrachloroethane	ND		0.00100	1	10/17/2018 20:06	WG1182275
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	10/17/2018 20:06	WG1182275
Tetrachloroethene	0.552		0.0200	20	10/18/2018 13:32	WG1182835
Toluene	0.0413		0.00100	1	10/17/2018 20:06	WG1182275
1,2,3-Trichlorobenzene	ND		0.00100	1	10/17/2018 20:06	WG1182275
1,2,4-Trichlorobenzene	ND		0.00100	1	10/17/2018 20:06	WG1182275
1,1,1-Trichloroethane	ND		0.00100	1	10/17/2018 20:06	WG1182275
1,1,2-Trichloroethane	ND		0.00100	1	10/17/2018 20:06	WG1182275
Trichloroethene	0.0604		0.00100	1	10/17/2018 20:06	WG1182275
Trichlorofluoromethane	ND		0.00500	1	10/17/2018 20:06	WG1182275
1,2,3-Trichloropropane	ND		0.00250	1	10/17/2018 20:06	WG1182275
1,2,4-Trimethylbenzene	1.00		0.0200	20	10/18/2018 13:32	WG1182835
1,2,3-Trimethylbenzene	0.261		0.0200	20	10/18/2018 13:32	WG1182835
1,3,5-Trimethylbenzene	0.270		0.0200	20	10/18/2018 13:32	WG1182835
Vinyl chloride	ND		0.00100	1	10/17/2018 20:06	WG1182275
Xylenes, Total	1.00		0.0600	20	10/18/2018 13:32	WG1182835
(S) Toluene-d8	103		80.0-120		10/17/2018 20:06	WG1182275
(S) Toluene-d8	103		80.0-120		10/18/2018 13:32	WG1182835
(S) Dibromofluoromethane	89.6		75.0-120		10/17/2018 20:06	WG1182275
(S) Dibromofluoromethane	93.8		75.0-120		10/18/2018 13:32	WG1182835
(S) 4-Bromofluorobenzene	84.9		77.0-126		10/17/2018 20:06	WG1182275
(S) 4-Bromofluorobenzene	97.0		77.0-126		10/18/2018 13:32	WG1182835

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.00500	1	10/19/2018 13:15	WG1183281

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	10/15/2018 13:59	WG1180340

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Arsenic	ND		0.0100	1	10/17/2018 00:44	WG1180204
Barium	0.101		0.00500	1	10/17/2018 00:44	WG1180204
Cadmium	ND		0.00200	1	10/17/2018 00:44	WG1180204
Chromium	ND		0.0100	1	10/17/2018 00:44	WG1180204
Lead	ND		0.00500	1	10/17/2018 00:44	WG1180204
Selenium	ND		0.0100	1	10/17/2018 00:44	WG1180204
Silver	ND		0.00500	1	10/17/2018 00:44	WG1180204

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Acetone	ND		0.0500	1	10/13/2018 05:27	WG1180358
Acrolein	ND		0.0500	1	10/13/2018 05:27	WG1180358
Acrylonitrile	ND		0.0100	1	10/13/2018 05:27	WG1180358
Benzene	ND		0.00100	1	10/13/2018 05:27	WG1180358
Bromobenzene	ND		0.00100	1	10/13/2018 05:27	WG1180358
Bromodichloromethane	ND		0.00100	1	10/13/2018 05:27	WG1180358
Bromoform	ND		0.00100	1	10/13/2018 05:27	WG1180358
Bromomethane	ND		0.00500	1	10/13/2018 05:27	WG1180358
n-Butylbenzene	ND		0.00100	1	10/13/2018 05:27	WG1180358
sec-Butylbenzene	ND		0.00100	1	10/13/2018 05:27	WG1180358
tert-Butylbenzene	ND		0.00100	1	10/13/2018 05:27	WG1180358
Carbon tetrachloride	ND		0.00100	1	10/13/2018 05:27	WG1180358
Chlorobenzene	ND		0.00100	1	10/13/2018 05:27	WG1180358
Chlorodibromomethane	ND		0.00100	1	10/13/2018 05:27	WG1180358
Chloroethane	ND		0.00500	1	10/13/2018 05:27	WG1180358
Chloroform	ND		0.00500	1	10/13/2018 05:27	WG1180358
Chloromethane	ND		0.00250	1	10/13/2018 05:27	WG1180358
2-Chlorotoluene	ND		0.00100	1	10/13/2018 05:27	WG1180358
4-Chlorotoluene	ND		0.00100	1	10/13/2018 05:27	WG1180358
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	10/13/2018 05:27	WG1180358
1,2-Dibromoethane	ND		0.00100	1	10/13/2018 05:27	WG1180358
Dibromomethane	ND		0.00100	1	10/13/2018 05:27	WG1180358
1,2-Dichlorobenzene	ND		0.00100	1	10/13/2018 05:27	WG1180358
1,3-Dichlorobenzene	ND		0.00100	1	10/13/2018 05:27	WG1180358
1,4-Dichlorobenzene	ND		0.00100	1	10/13/2018 05:27	WG1180358
Dichlorodifluoromethane	ND		0.00500	1	10/13/2018 05:27	WG1180358
1,1-Dichloroethane	ND		0.00100	1	10/13/2018 05:27	WG1180358
1,2-Dichloroethane	ND		0.00100	1	10/13/2018 05:27	WG1180358
1,1-Dichloroethene	ND		0.00100	1	10/13/2018 05:27	WG1180358
cis-1,2-Dichloroethene	ND		0.00100	1	10/13/2018 05:27	WG1180358
trans-1,2-Dichloroethene	ND		0.00100	1	10/13/2018 05:27	WG1180358
1,2-Dichloropropane	ND		0.00100	1	10/13/2018 05:27	WG1180358
1,1-Dichloropropene	ND		0.00100	1	10/13/2018 05:27	WG1180358

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 10/10/18 12:34

L1034216

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,3-Dichloropropane	ND		0.00100	1	10/13/2018 05:27	WG1180358
cis-1,3-Dichloropropene	ND		0.00100	1	10/13/2018 05:27	WG1180358
trans-1,3-Dichloropropene	ND		0.00100	1	10/13/2018 05:27	WG1180358
2,2-Dichloropropane	ND		0.00100	1	10/13/2018 05:27	WG1180358
Di-isopropyl ether	ND		0.00100	1	10/13/2018 05:27	WG1180358
Ethylbenzene	ND		0.00100	1	10/13/2018 05:27	WG1180358
Hexachloro-1,3-butadiene	ND		0.00100	1	10/13/2018 05:27	WG1180358
Isopropylbenzene	ND		0.00100	1	10/13/2018 05:27	WG1180358
p-Isopropyltoluene	ND		0.00100	1	10/13/2018 05:27	WG1180358
2-Butanone (MEK)	ND		0.0100	1	10/13/2018 05:27	WG1180358
Methylene Chloride	ND		0.00500	1	10/13/2018 05:27	WG1180358
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	10/13/2018 05:27	WG1180358
Methyl tert-butyl ether	ND		0.00100	1	10/13/2018 05:27	WG1180358
Naphthalene	ND		0.00500	1	10/13/2018 05:27	WG1180358
n-Propylbenzene	ND		0.00100	1	10/13/2018 05:27	WG1180358
Styrene	ND		0.00100	1	10/13/2018 05:27	WG1180358
1,1,1,2-Tetrachloroethane	ND		0.00100	1	10/13/2018 05:27	WG1180358
1,1,2,2-Tetrachloroethane	ND		0.00100	1	10/13/2018 05:27	WG1180358
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	10/13/2018 05:27	WG1180358
Tetrachloroethene	ND		0.00100	1	10/13/2018 05:27	WG1180358
Toluene	ND		0.00100	1	10/13/2018 05:27	WG1180358
1,2,3-Trichlorobenzene	ND		0.00100	1	10/13/2018 05:27	WG1180358
1,2,4-Trichlorobenzene	ND		0.00100	1	10/13/2018 05:27	WG1180358
1,1,1-Trichloroethane	ND		0.00100	1	10/13/2018 05:27	WG1180358
1,1,2-Trichloroethane	ND		0.00100	1	10/13/2018 05:27	WG1180358
Trichloroethene	ND		0.00100	1	10/13/2018 05:27	WG1180358
Trichlorofluoromethane	ND		0.00500	1	10/13/2018 05:27	WG1180358
1,2,3-Trichloropropane	ND		0.00250	1	10/13/2018 05:27	WG1180358
1,2,4-Trimethylbenzene	0.0119		0.00100	1	10/13/2018 05:27	WG1180358
1,2,3-Trimethylbenzene	0.00308		0.00100	1	10/13/2018 05:27	WG1180358
1,3,5-Trimethylbenzene	0.00330		0.00100	1	10/13/2018 05:27	WG1180358
Vinyl chloride	ND		0.00100	1	10/13/2018 05:27	WG1180358
Xylenes, Total	0.00852		0.00300	1	10/13/2018 05:27	WG1180358
(S) Toluene-d8	101		80.0-120		10/13/2018 05:27	WG1180358
(S) Dibromofluoromethane	99.2		75.0-120		10/13/2018 05:27	WG1180358
(S) 4-Bromofluorobenzene	98.5		77.0-126		10/13/2018 05:27	WG1180358

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.00500	1	10/19/2018 13:16	WG1183281

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	10/15/2018 14:02	WG1180340

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Arsenic	ND		0.0100	1	10/17/2018 00:46	WG1180204
Barium	0.131		0.00500	1	10/17/2018 00:46	WG1180204
Cadmium	ND		0.00200	1	10/17/2018 00:46	WG1180204
Chromium	ND		0.0100	1	10/17/2018 00:46	WG1180204
Lead	ND		0.00500	1	10/17/2018 00:46	WG1180204
Selenium	ND		0.0100	1	10/17/2018 00:46	WG1180204
Silver	ND		0.00500	1	10/17/2018 00:46	WG1180204

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Acetone	ND		0.0500	1	10/13/2018 05:47	WG1180358
Acrolein	ND		0.0500	1	10/13/2018 05:47	WG1180358
Acrylonitrile	ND		0.0100	1	10/13/2018 05:47	WG1180358
Benzene	ND		0.00100	1	10/13/2018 05:47	WG1180358
Bromobenzene	ND		0.00100	1	10/13/2018 05:47	WG1180358
Bromodichloromethane	ND		0.00100	1	10/13/2018 05:47	WG1180358
Bromoform	ND		0.00100	1	10/13/2018 05:47	WG1180358
Bromomethane	ND		0.00500	1	10/13/2018 05:47	WG1180358
n-Butylbenzene	ND		0.00100	1	10/13/2018 05:47	WG1180358
sec-Butylbenzene	ND		0.00100	1	10/13/2018 05:47	WG1180358
tert-Butylbenzene	ND		0.00100	1	10/13/2018 05:47	WG1180358
Carbon tetrachloride	ND		0.00100	1	10/13/2018 05:47	WG1180358
Chlorobenzene	ND		0.00100	1	10/13/2018 05:47	WG1180358
Chlorodibromomethane	ND		0.00100	1	10/13/2018 05:47	WG1180358
Chloroethane	ND		0.00500	1	10/13/2018 05:47	WG1180358
Chloroform	ND		0.00500	1	10/13/2018 05:47	WG1180358
Chloromethane	ND		0.00250	1	10/13/2018 05:47	WG1180358
2-Chlorotoluene	ND		0.00100	1	10/13/2018 05:47	WG1180358
4-Chlorotoluene	ND		0.00100	1	10/13/2018 05:47	WG1180358
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	10/13/2018 05:47	WG1180358
1,2-Dibromoethane	ND		0.00100	1	10/13/2018 05:47	WG1180358
Dibromomethane	ND		0.00100	1	10/13/2018 05:47	WG1180358
1,2-Dichlorobenzene	ND		0.00100	1	10/13/2018 05:47	WG1180358
1,3-Dichlorobenzene	ND		0.00100	1	10/13/2018 05:47	WG1180358
1,4-Dichlorobenzene	ND		0.00100	1	10/13/2018 05:47	WG1180358
Dichlorodifluoromethane	ND		0.00500	1	10/13/2018 05:47	WG1180358
1,1-Dichloroethane	ND		0.00100	1	10/13/2018 05:47	WG1180358
1,2-Dichloroethane	ND		0.00100	1	10/13/2018 05:47	WG1180358
1,1-Dichloroethene	ND		0.00100	1	10/13/2018 05:47	WG1180358
cis-1,2-Dichloroethene	0.0386		0.00100	1	10/13/2018 05:47	WG1180358
trans-1,2-Dichloroethene	ND		0.00100	1	10/13/2018 05:47	WG1180358
1,2-Dichloropropane	ND		0.00100	1	10/13/2018 05:47	WG1180358
1,1-Dichloropropene	ND		0.00100	1	10/13/2018 05:47	WG1180358

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 10/10/18 15:39

L1034216

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,3-Dichloropropane	ND		0.00100	1	10/13/2018 05:47	WG1180358
cis-1,3-Dichloropropene	ND		0.00100	1	10/13/2018 05:47	WG1180358
trans-1,3-Dichloropropene	ND		0.00100	1	10/13/2018 05:47	WG1180358
2,2-Dichloropropane	ND		0.00100	1	10/13/2018 05:47	WG1180358
Di-isopropyl ether	ND		0.00100	1	10/13/2018 05:47	WG1180358
Ethylbenzene	ND		0.00100	1	10/13/2018 05:47	WG1180358
Hexachloro-1,3-butadiene	ND		0.00100	1	10/13/2018 05:47	WG1180358
Isopropylbenzene	ND		0.00100	1	10/13/2018 05:47	WG1180358
p-Isopropyltoluene	ND		0.00100	1	10/13/2018 05:47	WG1180358
2-Butanone (MEK)	ND		0.0100	1	10/13/2018 05:47	WG1180358
Methylene Chloride	ND		0.00500	1	10/13/2018 05:47	WG1180358
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	10/13/2018 05:47	WG1180358
Methyl tert-butyl ether	ND		0.00100	1	10/13/2018 05:47	WG1180358
Naphthalene	ND		0.00500	1	10/13/2018 05:47	WG1180358
n-Propylbenzene	ND		0.00100	1	10/13/2018 05:47	WG1180358
Styrene	ND		0.00100	1	10/13/2018 05:47	WG1180358
1,1,1,2-Tetrachloroethane	ND		0.00100	1	10/13/2018 05:47	WG1180358
1,1,2,2-Tetrachloroethane	ND		0.00100	1	10/13/2018 05:47	WG1180358
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	10/13/2018 05:47	WG1180358
Tetrachloroethene	ND		0.00100	1	10/13/2018 05:47	WG1180358
Toluene	ND		0.00100	1	10/13/2018 05:47	WG1180358
1,2,3-Trichlorobenzene	ND		0.00100	1	10/13/2018 05:47	WG1180358
1,2,4-Trichlorobenzene	ND		0.00100	1	10/13/2018 05:47	WG1180358
1,1,1-Trichloroethane	ND		0.00100	1	10/13/2018 05:47	WG1180358
1,1,2-Trichloroethane	ND		0.00100	1	10/13/2018 05:47	WG1180358
Trichloroethene	0.00308		0.00100	1	10/13/2018 05:47	WG1180358
Trichlorofluoromethane	ND		0.00500	1	10/13/2018 05:47	WG1180358
1,2,3-Trichloropropane	ND		0.00250	1	10/13/2018 05:47	WG1180358
1,2,4-Trimethylbenzene	ND		0.00100	1	10/13/2018 05:47	WG1180358
1,2,3-Trimethylbenzene	ND		0.00100	1	10/13/2018 05:47	WG1180358
1,3,5-Trimethylbenzene	ND		0.00100	1	10/13/2018 05:47	WG1180358
Vinyl chloride	0.0664		0.00100	1	10/13/2018 05:47	WG1180358
Xylenes, Total	ND		0.00300	1	10/13/2018 05:47	WG1180358
(S) Toluene-d8	98.6		80.0-120		10/13/2018 05:47	WG1180358
(S) Dibromofluoromethane	97.1		75.0-120		10/13/2018 05:47	WG1180358
(S) 4-Bromofluorobenzene	98.8		77.0-126		10/13/2018 05:47	WG1180358

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	ND		0.00100	1	10/18/2018 17:42	WG1182011
Acenaphthylene	ND		0.00100	1	10/18/2018 17:42	WG1182011
Anthracene	ND		0.00100	1	10/18/2018 17:42	WG1182011
Benzidine	ND	J3	0.0100	1	10/18/2018 17:42	WG1182011
Benzo(a)anthracene	ND		0.00100	1	10/18/2018 17:42	WG1182011
Benzo(b)fluoranthene	ND		0.00100	1	10/18/2018 17:42	WG1182011
Benzo(k)fluoranthene	ND		0.00100	1	10/18/2018 17:42	WG1182011
Benzo(g,h,i)perylene	ND		0.00100	1	10/18/2018 17:42	WG1182011
Benzo(a)pyrene	ND		0.00100	1	10/18/2018 17:42	WG1182011
Bis(2-chloroethoxy)methane	ND		0.0100	1	10/18/2018 17:42	WG1182011
Bis(2-chloroethyl)ether	ND		0.0100	1	10/18/2018 17:42	WG1182011
Bis(2-chloroisopropyl)ether	ND		0.0100	1	10/18/2018 17:42	WG1182011
4-Bromophenyl-phenylether	ND		0.0100	1	10/18/2018 17:42	WG1182011
2-Chloronaphthalene	ND		0.00100	1	10/18/2018 17:42	WG1182011
4-Chlorophenyl-phenylether	ND		0.0100	1	10/18/2018 17:42	WG1182011
Chrysene	ND		0.00100	1	10/18/2018 17:42	WG1182011



Collected date/time: 10/10/18 15:39

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Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dibenz(a,h)anthracene	ND		0.00100	1	10/18/2018 17:42	WG1182011
3,3-Dichlorobenzidine	ND		0.0100	1	10/18/2018 17:42	WG1182011
2,4-Dinitrotoluene	ND		0.0100	1	10/18/2018 17:42	WG1182011
2,6-Dinitrotoluene	ND		0.0100	1	10/18/2018 17:42	WG1182011
Fluoranthene	ND		0.00100	1	10/18/2018 17:42	WG1182011
Fluorene	ND		0.00100	1	10/18/2018 17:42	WG1182011
Hexachlorobenzene	ND		0.00100	1	10/18/2018 17:42	WG1182011
Hexachloro-1,3-butadiene	ND		0.0100	1	10/18/2018 17:42	WG1182011
Hexachlorocyclopentadiene	ND		0.0100	1	10/18/2018 17:42	WG1182011
Hexachloroethane	ND		0.0100	1	10/18/2018 17:42	WG1182011
Indeno(1,2,3-cd)pyrene	ND		0.00100	1	10/18/2018 17:42	WG1182011
Isophorone	ND		0.0100	1	10/18/2018 17:42	WG1182011
Naphthalene	ND		0.00100	1	10/18/2018 17:42	WG1182011
Nitrobenzene	ND		0.0100	1	10/18/2018 17:42	WG1182011
n-Nitrosodimethylamine	ND		0.0100	1	10/18/2018 17:42	WG1182011
n-Nitrosodiphenylamine	ND		0.0100	1	10/18/2018 17:42	WG1182011
n-Nitrosodi-n-propylamine	ND		0.0100	1	10/18/2018 17:42	WG1182011
Phenanthrene	ND		0.00100	1	10/18/2018 17:42	WG1182011
Benzylbutyl phthalate	ND		0.00300	1	10/18/2018 17:42	WG1182011
Bis(2-ethylhexyl)phthalate	ND		0.00300	1	10/18/2018 17:42	WG1182011
Di-n-butyl phthalate	ND		0.00300	1	10/18/2018 17:42	WG1182011
Diethyl phthalate	ND		0.00300	1	10/18/2018 17:42	WG1182011
Dimethyl phthalate	ND		0.00300	1	10/18/2018 17:42	WG1182011
Di-n-octyl phthalate	ND		0.00300	1	10/18/2018 17:42	WG1182011
Pyrene	ND		0.00100	1	10/18/2018 17:42	WG1182011
1,2,4-Trichlorobenzene	ND		0.0100	1	10/18/2018 17:42	WG1182011
4-Chloro-3-methylphenol	ND		0.0100	1	10/18/2018 17:42	WG1182011
2-Chlorophenol	ND		0.0100	1	10/18/2018 17:42	WG1182011
2,4-Dichlorophenol	ND		0.0100	1	10/18/2018 17:42	WG1182011
2,4-Dimethylphenol	ND		0.0100	1	10/18/2018 17:42	WG1182011
4,6-Dinitro-2-methylphenol	ND		0.0100	1	10/18/2018 17:42	WG1182011
2,4-Dinitrophenol	ND		0.0100	1	10/18/2018 17:42	WG1182011
2-Nitrophenol	ND		0.0100	1	10/18/2018 17:42	WG1182011
4-Nitrophenol	ND		0.0100	1	10/18/2018 17:42	WG1182011
Pentachlorophenol	ND		0.0100	1	10/18/2018 17:42	WG1182011
Phenol	ND		0.0100	1	10/18/2018 17:42	WG1182011
2,4,6-Trichlorophenol	ND		0.0100	1	10/18/2018 17:42	WG1182011
(S) 2-Fluorophenol	53.6		10.0-120		10/18/2018 17:42	WG1182011
(S) Phenol-d5	31.1		10.0-120		10/18/2018 17:42	WG1182011
(S) Nitrobenzene-d5	73.8		10.0-127		10/18/2018 17:42	WG1182011
(S) 2-Fluorobiphenyl	70.2		10.0-130		10/18/2018 17:42	WG1182011
(S) 2,4,6-Tribromophenol	54.6		10.0-155		10/18/2018 17:42	WG1182011
(S) p-Terphenyl-d14	79.8		10.0-128		10/18/2018 17:42	WG1182011

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.00500	1	10/19/2018 13:17	WG1183281

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	10/15/2018 14:04	WG1180340

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Arsenic	ND		0.0100	1	10/17/2018 00:49	WG1180204
Barium	0.0893		0.00500	1	10/17/2018 00:49	WG1180204
Cadmium	ND		0.00200	1	10/17/2018 00:49	WG1180204
Chromium	ND		0.0100	1	10/17/2018 00:49	WG1180204
Lead	ND		0.00500	1	10/17/2018 00:49	WG1180204
Selenium	ND		0.0100	1	10/17/2018 00:49	WG1180204
Silver	ND		0.00500	1	10/17/2018 00:49	WG1180204

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Acetone	ND		0.0500	1	10/13/2018 06:07	WG1180358
Acrolein	ND		0.0500	1	10/13/2018 06:07	WG1180358
Acrylonitrile	ND		0.0100	1	10/13/2018 06:07	WG1180358
Benzene	ND		0.00100	1	10/13/2018 06:07	WG1180358
Bromobenzene	ND		0.00100	1	10/13/2018 06:07	WG1180358
Bromodichloromethane	ND		0.00100	1	10/13/2018 06:07	WG1180358
Bromoform	ND		0.00100	1	10/13/2018 06:07	WG1180358
Bromomethane	ND		0.00500	1	10/13/2018 06:07	WG1180358
n-Butylbenzene	ND		0.00100	1	10/13/2018 06:07	WG1180358
sec-Butylbenzene	ND		0.00100	1	10/13/2018 06:07	WG1180358
tert-Butylbenzene	ND		0.00100	1	10/13/2018 06:07	WG1180358
Carbon tetrachloride	ND		0.00100	1	10/13/2018 06:07	WG1180358
Chlorobenzene	ND		0.00100	1	10/13/2018 06:07	WG1180358
Chlorodibromomethane	ND		0.00100	1	10/13/2018 06:07	WG1180358
Chloroethane	ND		0.00500	1	10/13/2018 06:07	WG1180358
Chloroform	ND		0.00500	1	10/13/2018 06:07	WG1180358
Chloromethane	ND		0.00250	1	10/13/2018 06:07	WG1180358
2-Chlorotoluene	ND		0.00100	1	10/13/2018 06:07	WG1180358
4-Chlorotoluene	ND		0.00100	1	10/13/2018 06:07	WG1180358
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	10/13/2018 06:07	WG1180358
1,2-Dibromoethane	ND		0.00100	1	10/13/2018 06:07	WG1180358
Dibromomethane	ND		0.00100	1	10/13/2018 06:07	WG1180358
1,2-Dichlorobenzene	ND		0.00100	1	10/13/2018 06:07	WG1180358
1,3-Dichlorobenzene	ND		0.00100	1	10/13/2018 06:07	WG1180358
1,4-Dichlorobenzene	ND		0.00100	1	10/13/2018 06:07	WG1180358
Dichlorodifluoromethane	ND		0.00500	1	10/13/2018 06:07	WG1180358
1,1-Dichloroethane	0.00191		0.00100	1	10/13/2018 06:07	WG1180358
1,2-Dichloroethane	ND		0.00100	1	10/13/2018 06:07	WG1180358
1,1-Dichloroethene	ND		0.00100	1	10/13/2018 06:07	WG1180358
cis-1,2-Dichloroethene	0.0643		0.00100	1	10/13/2018 06:07	WG1180358
trans-1,2-Dichloroethene	0.00201		0.00100	1	10/13/2018 06:07	WG1180358
1,2-Dichloropropane	ND		0.00100	1	10/13/2018 06:07	WG1180358
1,1-Dichloropropene	ND		0.00100	1	10/13/2018 06:07	WG1180358

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 10/10/18 16:45

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Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,3-Dichloropropane	ND		0.00100	1	10/13/2018 06:07	WG1180358
cis-1,3-Dichloropropene	ND		0.00100	1	10/13/2018 06:07	WG1180358
trans-1,3-Dichloropropene	ND		0.00100	1	10/13/2018 06:07	WG1180358
2,2-Dichloropropane	ND		0.00100	1	10/13/2018 06:07	WG1180358
Di-isopropyl ether	ND		0.00100	1	10/13/2018 06:07	WG1180358
Ethylbenzene	ND		0.00100	1	10/13/2018 06:07	WG1180358
Hexachloro-1,3-butadiene	ND		0.00100	1	10/13/2018 06:07	WG1180358
Isopropylbenzene	ND		0.00100	1	10/13/2018 06:07	WG1180358
p-Isopropyltoluene	ND		0.00100	1	10/13/2018 06:07	WG1180358
2-Butanone (MEK)	ND		0.0100	1	10/13/2018 06:07	WG1180358
Methylene Chloride	ND		0.00500	1	10/13/2018 06:07	WG1180358
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	10/13/2018 06:07	WG1180358
Methyl tert-butyl ether	ND		0.00100	1	10/13/2018 06:07	WG1180358
Naphthalene	ND		0.00500	1	10/13/2018 06:07	WG1180358
n-Propylbenzene	ND		0.00100	1	10/13/2018 06:07	WG1180358
Styrene	ND		0.00100	1	10/13/2018 06:07	WG1180358
1,1,1,2-Tetrachloroethane	ND		0.00100	1	10/13/2018 06:07	WG1180358
1,1,2,2-Tetrachloroethane	ND		0.00100	1	10/13/2018 06:07	WG1180358
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	10/13/2018 06:07	WG1180358
Tetrachloroethene	ND		0.00100	1	10/13/2018 06:07	WG1180358
Toluene	ND		0.00100	1	10/13/2018 06:07	WG1180358
1,2,3-Trichlorobenzene	ND		0.00100	1	10/13/2018 06:07	WG1180358
1,2,4-Trichlorobenzene	ND		0.00100	1	10/13/2018 06:07	WG1180358
1,1,1-Trichloroethane	ND		0.00100	1	10/13/2018 06:07	WG1180358
1,1,2-Trichloroethane	ND		0.00100	1	10/13/2018 06:07	WG1180358
Trichloroethene	0.0162		0.00100	1	10/13/2018 06:07	WG1180358
Trichlorofluoromethane	ND		0.00500	1	10/13/2018 06:07	WG1180358
1,2,3-Trichloropropane	ND		0.00250	1	10/13/2018 06:07	WG1180358
1,2,4-Trimethylbenzene	ND		0.00100	1	10/13/2018 06:07	WG1180358
1,2,3-Trimethylbenzene	ND		0.00100	1	10/13/2018 06:07	WG1180358
1,3,5-Trimethylbenzene	ND		0.00100	1	10/13/2018 06:07	WG1180358
Vinyl chloride	0.0410		0.00100	1	10/13/2018 06:07	WG1180358
Xylenes, Total	ND		0.00300	1	10/13/2018 06:07	WG1180358
(S) Toluene-d8	97.3		80.0-120		10/13/2018 06:07	WG1180358
(S) Dibromofluoromethane	99.6		75.0-120		10/13/2018 06:07	WG1180358
(S) 4-Bromofluorobenzene	99.1		77.0-126		10/13/2018 06:07	WG1180358

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
TPH (GC/FID) Low Fraction	ND		0.100	1	10/13/2018 09:33	WG1180388
(S) a, a, a-Trifluorotoluene(FID)	95.8		78.0-120		10/13/2018 09:33	WG1180388

1 Cp

2 Tc

3 Ss

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	10/12/2018 23:24	WG1180369
Toluene	ND		0.00100	1	10/12/2018 23:24	WG1180369
Ethylbenzene	ND		0.00100	1	10/12/2018 23:24	WG1180369
Total Xylenes	ND		0.00300	1	10/12/2018 23:24	WG1180369
(S) Toluene-d8	101		80.0-120		10/12/2018 23:24	WG1180369
(S) Dibromofluoromethane	95.2		75.0-120		10/12/2018 23:24	WG1180369
(S) a, a, a-Trifluorotoluene	99.2		80.0-120		10/12/2018 23:24	WG1180369
(S) 4-Bromofluorobenzene	98.7		77.0-126		10/12/2018 23:24	WG1180369

4 Cn

5 Sr

6 Qc

7 Gl

Semi-Volatile Organic Compounds (GC) by Method 3511/8015

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
TPH (GC/FID) High Fraction	ND		0.100	1	10/16/2018 18:14	WG1180854
(S) o-Terphenyl	83.7		31.0-160		10/16/2018 18:14	WG1180854

8 Al

9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Anthracene	ND		0.0000500	1	10/15/2018 10:01	WG1180864
Acenaphthene	ND		0.0000500	1	10/15/2018 10:01	WG1180864
Acenaphthylene	ND		0.0000500	1	10/15/2018 10:01	WG1180864
Benzo(a)anthracene	ND		0.0000500	1	10/15/2018 10:01	WG1180864
Benzo(a)pyrene	ND		0.0000500	1	10/15/2018 10:01	WG1180864
Benzo(b)fluoranthene	ND		0.0000500	1	10/15/2018 10:01	WG1180864
Benzo(g,h,i)perylene	ND		0.0000500	1	10/15/2018 10:01	WG1180864
Benzo(k)fluoranthene	ND		0.0000500	1	10/15/2018 10:01	WG1180864
Chrysene	ND		0.0000500	1	10/15/2018 10:01	WG1180864
Dibenz(a,h)anthracene	ND		0.0000500	1	10/15/2018 10:01	WG1180864
Fluoranthene	ND		0.0000500	1	10/15/2018 10:01	WG1180864
Fluorene	ND		0.0000500	1	10/15/2018 10:01	WG1180864
Indeno(1,2,3-cd)pyrene	ND		0.0000500	1	10/15/2018 10:01	WG1180864
Naphthalene	ND		0.000250	1	10/15/2018 10:01	WG1180864
Phenanthrene	ND		0.0000500	1	10/15/2018 10:01	WG1180864
Pyrene	ND		0.0000500	1	10/15/2018 10:01	WG1180864
1-Methylnaphthalene	ND		0.000250	1	10/15/2018 10:01	WG1180864
2-Methylnaphthalene	ND		0.000250	1	10/15/2018 10:01	WG1180864
2-Chloronaphthalene	ND		0.000250	1	10/15/2018 10:01	WG1180864
(S) Nitrobenzene-d5	71.1		31.0-160		10/15/2018 10:01	WG1180864
(S) 2-Fluorobiphenyl	88.4		48.0-148		10/15/2018 10:01	WG1180864
(S) p-Terphenyl-d14	86.3		37.0-146		10/15/2018 10:01	WG1180864



Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.00500	1	10/19/2018 13:18	WG1183281

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	10/15/2018 14:11	WG1180340

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Arsenic	ND		0.0100	1	10/17/2018 00:52	WG1180204
Barium	0.0783		0.00500	1	10/17/2018 00:52	WG1180204
Cadmium	ND		0.00200	1	10/17/2018 00:52	WG1180204
Chromium	ND		0.0100	1	10/17/2018 00:52	WG1180204
Lead	0.00565		0.00500	1	10/17/2018 00:52	WG1180204
Selenium	ND		0.0100	1	10/17/2018 00:52	WG1180204
Silver	ND		0.00500	1	10/17/2018 00:52	WG1180204

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Acetone	ND		0.0500	1	10/13/2018 06:27	WG1180358
Acrolein	ND		0.0500	1	10/13/2018 06:27	WG1180358
Acrylonitrile	ND		0.0100	1	10/13/2018 06:27	WG1180358
Benzene	ND		0.00100	1	10/13/2018 06:27	WG1180358
Bromobenzene	ND		0.00100	1	10/13/2018 06:27	WG1180358
Bromodichloromethane	ND		0.00100	1	10/13/2018 06:27	WG1180358
Bromoform	ND		0.00100	1	10/13/2018 06:27	WG1180358
Bromomethane	ND		0.00500	1	10/13/2018 06:27	WG1180358
n-Butylbenzene	ND		0.00100	1	10/13/2018 06:27	WG1180358
sec-Butylbenzene	ND		0.00100	1	10/13/2018 06:27	WG1180358
tert-Butylbenzene	ND		0.00100	1	10/13/2018 06:27	WG1180358
Carbon tetrachloride	ND		0.00100	1	10/13/2018 06:27	WG1180358
Chlorobenzene	ND		0.00100	1	10/13/2018 06:27	WG1180358
Chlorodibromomethane	ND		0.00100	1	10/13/2018 06:27	WG1180358
Chloroethane	ND		0.00500	1	10/13/2018 06:27	WG1180358
Chloroform	ND		0.00500	1	10/13/2018 06:27	WG1180358
Chloromethane	ND		0.00250	1	10/13/2018 06:27	WG1180358
2-Chlorotoluene	ND		0.00100	1	10/13/2018 06:27	WG1180358
4-Chlorotoluene	ND		0.00100	1	10/13/2018 06:27	WG1180358
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	10/13/2018 06:27	WG1180358
1,2-Dibromoethane	ND		0.00100	1	10/13/2018 06:27	WG1180358
Dibromomethane	ND		0.00100	1	10/13/2018 06:27	WG1180358
1,2-Dichlorobenzene	ND		0.00100	1	10/13/2018 06:27	WG1180358
1,3-Dichlorobenzene	ND		0.00100	1	10/13/2018 06:27	WG1180358
1,4-Dichlorobenzene	ND		0.00100	1	10/13/2018 06:27	WG1180358
Dichlorodifluoromethane	ND		0.00500	1	10/13/2018 06:27	WG1180358
1,1-Dichloroethane	ND		0.00100	1	10/13/2018 06:27	WG1180358
1,2-Dichloroethane	ND		0.00100	1	10/13/2018 06:27	WG1180358
1,1-Dichloroethene	ND		0.00100	1	10/13/2018 06:27	WG1180358
cis-1,2-Dichloroethene	0.0860		0.00100	1	10/13/2018 06:27	WG1180358
trans-1,2-Dichloroethene	0.00541		0.00100	1	10/13/2018 06:27	WG1180358
1,2-Dichloropropane	ND		0.00100	1	10/13/2018 06:27	WG1180358
1,1-Dichloropropene	ND		0.00100	1	10/13/2018 06:27	WG1180358

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 10/11/18 10:47

L1034216

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,3-Dichloropropane	ND		0.00100	1	10/13/2018 06:27	WG1180358
cis-1,3-Dichloropropene	ND		0.00100	1	10/13/2018 06:27	WG1180358
trans-1,3-Dichloropropene	ND		0.00100	1	10/13/2018 06:27	WG1180358
2,2-Dichloropropane	ND		0.00100	1	10/13/2018 06:27	WG1180358
Di-isopropyl ether	ND		0.00100	1	10/13/2018 06:27	WG1180358
Ethylbenzene	ND		0.00100	1	10/13/2018 06:27	WG1180358
Hexachloro-1,3-butadiene	ND		0.00100	1	10/13/2018 06:27	WG1180358
Isopropylbenzene	ND		0.00100	1	10/13/2018 06:27	WG1180358
p-Isopropyltoluene	ND		0.00100	1	10/13/2018 06:27	WG1180358
2-Butanone (MEK)	ND		0.0100	1	10/13/2018 06:27	WG1180358
Methylene Chloride	ND		0.00500	1	10/13/2018 06:27	WG1180358
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	10/13/2018 06:27	WG1180358
Methyl tert-butyl ether	ND		0.00100	1	10/13/2018 06:27	WG1180358
Naphthalene	ND		0.00500	1	10/13/2018 06:27	WG1180358
n-Propylbenzene	ND		0.00100	1	10/13/2018 06:27	WG1180358
Styrene	ND		0.00100	1	10/13/2018 06:27	WG1180358
1,1,1,2-Tetrachloroethane	ND		0.00100	1	10/13/2018 06:27	WG1180358
1,1,2,2-Tetrachloroethane	ND		0.00100	1	10/13/2018 06:27	WG1180358
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	10/13/2018 06:27	WG1180358
Tetrachloroethene	0.0498		0.00100	1	10/13/2018 06:27	WG1180358
Toluene	ND		0.00100	1	10/13/2018 06:27	WG1180358
1,2,3-Trichlorobenzene	ND		0.00100	1	10/13/2018 06:27	WG1180358
1,2,4-Trichlorobenzene	ND		0.00100	1	10/13/2018 06:27	WG1180358
1,1,1-Trichloroethane	ND		0.00100	1	10/13/2018 06:27	WG1180358
1,1,2-Trichloroethane	ND		0.00100	1	10/13/2018 06:27	WG1180358
Trichloroethene	0.110		0.00100	1	10/13/2018 06:27	WG1180358
Trichlorofluoromethane	ND		0.00500	1	10/13/2018 06:27	WG1180358
1,2,3-Trichloropropane	ND		0.00250	1	10/13/2018 06:27	WG1180358
1,2,4-Trimethylbenzene	ND		0.00100	1	10/13/2018 06:27	WG1180358
1,2,3-Trimethylbenzene	ND		0.00100	1	10/13/2018 06:27	WG1180358
1,3,5-Trimethylbenzene	ND		0.00100	1	10/13/2018 06:27	WG1180358
Vinyl chloride	0.00126		0.00100	1	10/13/2018 06:27	WG1180358
Xylenes, Total	ND		0.00300	1	10/13/2018 06:27	WG1180358
(S) Toluene-d8	94.3		80.0-120		10/13/2018 06:27	WG1180358
(S) Dibromofluoromethane	97.4		75.0-120		10/13/2018 06:27	WG1180358
(S) 4-Bromofluorobenzene	98.0		77.0-126		10/13/2018 06:27	WG1180358

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Collected date/time: 10/10/18 00:00

L1034216

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	10/13/2018 06:47	WG1180358
Acrolein	ND		0.0500	1	10/13/2018 06:47	WG1180358
Acrylonitrile	ND		0.0100	1	10/13/2018 06:47	WG1180358
Benzene	ND		0.00100	1	10/13/2018 06:47	WG1180358
Bromobenzene	ND		0.00100	1	10/13/2018 06:47	WG1180358
Bromodichloromethane	ND		0.00100	1	10/13/2018 06:47	WG1180358
Bromoform	ND		0.00100	1	10/13/2018 06:47	WG1180358
Bromomethane	ND		0.00500	1	10/13/2018 06:47	WG1180358
n-Butylbenzene	0.00210		0.00100	1	10/13/2018 06:47	WG1180358
sec-Butylbenzene	0.00329		0.00100	1	10/13/2018 06:47	WG1180358
tert-Butylbenzene	ND		0.00100	1	10/13/2018 06:47	WG1180358
Carbon tetrachloride	ND		0.00100	1	10/13/2018 06:47	WG1180358
Chlorobenzene	ND		0.00100	1	10/13/2018 06:47	WG1180358
Chlorodibromomethane	ND		0.00100	1	10/13/2018 06:47	WG1180358
Chloroethane	ND		0.00500	1	10/13/2018 06:47	WG1180358
Chloroform	ND		0.00500	1	10/13/2018 06:47	WG1180358
Chloromethane	ND		0.00250	1	10/13/2018 06:47	WG1180358
2-Chlorotoluene	ND		0.00100	1	10/13/2018 06:47	WG1180358
4-Chlorotoluene	ND		0.00100	1	10/13/2018 06:47	WG1180358
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	10/13/2018 06:47	WG1180358
1,2-Dibromoethane	ND		0.00100	1	10/13/2018 06:47	WG1180358
Dibromomethane	ND		0.00100	1	10/13/2018 06:47	WG1180358
1,2-Dichlorobenzene	ND		0.00100	1	10/13/2018 06:47	WG1180358
1,3-Dichlorobenzene	ND		0.00100	1	10/13/2018 06:47	WG1180358
1,4-Dichlorobenzene	ND		0.00100	1	10/13/2018 06:47	WG1180358
Dichlorodifluoromethane	ND		0.00500	1	10/13/2018 06:47	WG1180358
1,1-Dichloroethane	ND		0.00100	1	10/13/2018 06:47	WG1180358
1,2-Dichloroethane	ND		0.00100	1	10/13/2018 06:47	WG1180358
1,1-Dichloroethene	ND		0.00100	1	10/13/2018 06:47	WG1180358
cis-1,2-Dichloroethene	0.374		0.0500	50	10/17/2018 21:05	WG1182275
trans-1,2-Dichloroethene	0.00442		0.00100	1	10/13/2018 06:47	WG1180358
1,2-Dichloropropane	ND		0.00100	1	10/13/2018 06:47	WG1180358
1,1-Dichloropropene	ND		0.00100	1	10/13/2018 06:47	WG1180358
1,3-Dichloropropane	ND		0.00100	1	10/13/2018 06:47	WG1180358
cis-1,3-Dichloropropene	ND		0.00100	1	10/13/2018 06:47	WG1180358
trans-1,3-Dichloropropene	ND		0.00100	1	10/13/2018 06:47	WG1180358
2,2-Dichloropropane	ND		0.00100	1	10/13/2018 06:47	WG1180358
Di-isopropyl ether	ND		0.00100	1	10/13/2018 06:47	WG1180358
Ethylbenzene	0.118		0.00100	1	10/13/2018 06:47	WG1180358
Hexachloro-1,3-butadiene	ND		0.00100	1	10/13/2018 06:47	WG1180358
Isopropylbenzene	0.0212		0.00100	1	10/13/2018 06:47	WG1180358
p-Isopropyltoluene	0.0153		0.00100	1	10/13/2018 06:47	WG1180358
2-Butanone (MEK)	ND		0.0100	1	10/13/2018 06:47	WG1180358
Methylene Chloride	ND		0.00500	1	10/13/2018 06:47	WG1180358
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	10/13/2018 06:47	WG1180358
Methyl tert-butyl ether	ND		0.00100	1	10/13/2018 06:47	WG1180358
Naphthalene	0.00624		0.00500	1	10/13/2018 06:47	WG1180358
n-Propylbenzene	0.0526		0.00100	1	10/13/2018 06:47	WG1180358
Styrene	ND		0.00100	1	10/13/2018 06:47	WG1180358
1,1,1,2-Tetrachloroethane	ND		0.00100	1	10/13/2018 06:47	WG1180358
1,1,2,2-Tetrachloroethane	ND		0.00100	1	10/13/2018 06:47	WG1180358
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	10/13/2018 06:47	WG1180358
Tetrachloroethene	0.558		0.0500	50	10/17/2018 21:05	WG1182275
Toluene	0.0387		0.00100	1	10/13/2018 06:47	WG1180358
1,2,3-Trichlorobenzene	ND		0.00100	1	10/13/2018 06:47	WG1180358
1,2,4-Trichlorobenzene	ND		0.00100	1	10/13/2018 06:47	WG1180358

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 10/10/18 00:00

L1034216

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,1,1-Trichloroethane	ND		0.00100	1	10/13/2018 06:47	WG1180358
1,1,2-Trichloroethane	ND		0.00100	1	10/13/2018 06:47	WG1180358
Trichloroethene	0.0640		0.00100	1	10/13/2018 06:47	WG1180358
Trichlorofluoromethane	ND		0.00500	1	10/13/2018 06:47	WG1180358
1,2,3-Trichloropropane	ND		0.00250	1	10/13/2018 06:47	WG1180358
1,2,4-Trimethylbenzene	0.950		0.0500	50	10/17/2018 21:05	WG1182275
1,2,3-Trimethylbenzene	0.249		0.0500	50	10/17/2018 21:05	WG1182275
1,3,5-Trimethylbenzene	0.235		0.0500	50	10/17/2018 21:05	WG1182275
Vinyl chloride	ND		0.00100	1	10/13/2018 06:47	WG1180358
Xylenes, Total	0.957		0.150	50	10/17/2018 21:05	WG1182275
(S) Toluene-d8	102		80.0-120		10/13/2018 06:47	WG1180358
(S) Toluene-d8	103		80.0-120		10/17/2018 21:05	WG1182275
(S) Dibromofluoromethane	96.0		75.0-120		10/13/2018 06:47	WG1180358
(S) Dibromofluoromethane	91.8		75.0-120		10/17/2018 21:05	WG1182275
(S) 4-Bromofluorobenzene	101		77.0-126		10/13/2018 06:47	WG1180358
(S) 4-Bromofluorobenzene	94.4		77.0-126		10/17/2018 21:05	WG1182275

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Acetone	ND		0.0500	1	10/13/2018 07:07	WG1180358
Acrolein	ND		0.0500	1	10/13/2018 07:07	WG1180358
Acrylonitrile	ND		0.0100	1	10/13/2018 07:07	WG1180358
Benzene	ND		0.00100	1	10/13/2018 07:07	WG1180358
Bromobenzene	ND		0.00100	1	10/13/2018 07:07	WG1180358
Bromodichloromethane	ND		0.00100	1	10/13/2018 07:07	WG1180358
Bromoform	ND		0.00100	1	10/13/2018 07:07	WG1180358
Bromomethane	ND		0.00500	1	10/13/2018 07:07	WG1180358
n-Butylbenzene	ND		0.00100	1	10/13/2018 07:07	WG1180358
sec-Butylbenzene	ND		0.00100	1	10/13/2018 07:07	WG1180358
tert-Butylbenzene	ND		0.00100	1	10/13/2018 07:07	WG1180358
Carbon tetrachloride	ND		0.00100	1	10/13/2018 07:07	WG1180358
Chlorobenzene	ND		0.00100	1	10/13/2018 07:07	WG1180358
Chlorodibromomethane	ND		0.00100	1	10/13/2018 07:07	WG1180358
Chloroethane	ND		0.00500	1	10/13/2018 07:07	WG1180358
Chloroform	ND		0.00500	1	10/13/2018 07:07	WG1180358
Chloromethane	ND		0.00250	1	10/13/2018 07:07	WG1180358
2-Chlorotoluene	ND		0.00100	1	10/13/2018 07:07	WG1180358
4-Chlorotoluene	ND		0.00100	1	10/13/2018 07:07	WG1180358
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	10/13/2018 07:07	WG1180358
1,2-Dibromoethane	ND		0.00100	1	10/13/2018 07:07	WG1180358
Dibromomethane	ND		0.00100	1	10/13/2018 07:07	WG1180358
1,2-Dichlorobenzene	ND		0.00100	1	10/13/2018 07:07	WG1180358
1,3-Dichlorobenzene	ND		0.00100	1	10/13/2018 07:07	WG1180358
1,4-Dichlorobenzene	ND		0.00100	1	10/13/2018 07:07	WG1180358
Dichlorodifluoromethane	ND		0.00500	1	10/13/2018 07:07	WG1180358
1,1-Dichloroethane	ND		0.00100	1	10/13/2018 07:07	WG1180358
1,2-Dichloroethane	ND		0.00100	1	10/13/2018 07:07	WG1180358
1,1-Dichloroethene	ND		0.00100	1	10/13/2018 07:07	WG1180358
cis-1,2-Dichloroethene	ND		0.00100	1	10/13/2018 07:07	WG1180358
trans-1,2-Dichloroethene	ND		0.00100	1	10/13/2018 07:07	WG1180358
1,2-Dichloropropane	ND		0.00100	1	10/13/2018 07:07	WG1180358
1,1-Dichloropropene	ND		0.00100	1	10/13/2018 07:07	WG1180358
1,3-Dichloropropane	ND		0.00100	1	10/13/2018 07:07	WG1180358
cis-1,3-Dichloropropene	ND		0.00100	1	10/13/2018 07:07	WG1180358
trans-1,3-Dichloropropene	ND		0.00100	1	10/13/2018 07:07	WG1180358
2,2-Dichloropropane	ND		0.00100	1	10/13/2018 07:07	WG1180358
Di-isopropyl ether	ND		0.00100	1	10/13/2018 07:07	WG1180358
Ethylbenzene	ND		0.00100	1	10/13/2018 07:07	WG1180358
Hexachloro-1,3-butadiene	ND		0.00100	1	10/13/2018 07:07	WG1180358
Isopropylbenzene	ND		0.00100	1	10/13/2018 07:07	WG1180358
p-Isopropyltoluene	ND		0.00100	1	10/13/2018 07:07	WG1180358
2-Butanone (MEK)	ND		0.0100	1	10/13/2018 07:07	WG1180358
Methylene Chloride	ND		0.00500	1	10/13/2018 07:07	WG1180358
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	10/13/2018 07:07	WG1180358
Methyl tert-butyl ether	ND		0.00100	1	10/13/2018 07:07	WG1180358
Naphthalene	ND		0.00500	1	10/13/2018 07:07	WG1180358
n-Propylbenzene	ND		0.00100	1	10/13/2018 07:07	WG1180358
Styrene	ND		0.00100	1	10/13/2018 07:07	WG1180358
1,1,1,2-Tetrachloroethane	ND		0.00100	1	10/13/2018 07:07	WG1180358
1,1,2,2-Tetrachloroethane	ND		0.00100	1	10/13/2018 07:07	WG1180358
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	10/13/2018 07:07	WG1180358
Tetrachloroethene	ND		0.00100	1	10/13/2018 07:07	WG1180358
Toluene	ND		0.00100	1	10/13/2018 07:07	WG1180358
1,2,3-Trichlorobenzene	ND		0.00100	1	10/13/2018 07:07	WG1180358
1,2,4-Trichlorobenzene	ND		0.00100	1	10/13/2018 07:07	WG1180358

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 10/08/18 16:40

L1034216

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch	
1,1,1-Trichloroethane	ND		0.00100	1	10/13/2018 07:07	WG1180358	1 Cp
1,1,2-Trichloroethane	ND		0.00100	1	10/13/2018 07:07	WG1180358	2 Tc
Trichloroethene	ND		0.00100	1	10/13/2018 07:07	WG1180358	3 Ss
Trichlorofluoromethane	ND		0.00500	1	10/13/2018 07:07	WG1180358	4 Cn
1,2,3-Trichloropropane	ND		0.00250	1	10/13/2018 07:07	WG1180358	5 Sr
1,2,4-Trimethylbenzene	ND		0.00100	1	10/18/2018 13:52	WG1182835	6 Qc
1,2,3-Trimethylbenzene	ND		0.00100	1	10/13/2018 07:07	WG1180358	7 Gl
1,3,5-Trimethylbenzene	ND		0.00100	1	10/13/2018 07:07	WG1180358	8 Al
Vinyl chloride	ND		0.00100	1	10/13/2018 07:07	WG1180358	9 Sc
Xylenes, Total	ND		0.00300	1	10/13/2018 07:07	WG1180358	
(S) Toluene-d8	100		80.0-120		10/13/2018 07:07	WG1180358	
(S) Toluene-d8	102		80.0-120		10/18/2018 13:52	WG1182835	
(S) Dibromofluoromethane	98.4		75.0-120		10/13/2018 07:07	WG1180358	
(S) Dibromofluoromethane	92.3		75.0-120		10/18/2018 13:52	WG1182835	
(S) 4-Bromofluorobenzene	98.7		77.0-126		10/13/2018 07:07	WG1180358	
(S) 4-Bromofluorobenzene	99.3		77.0-126		10/18/2018 13:52	WG1182835	



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Acetone	ND		0.0500	1	10/13/2018 07:27	WG1180358
Acrolein	ND		0.0500	1	10/13/2018 07:27	WG1180358
Acrylonitrile	ND		0.0100	1	10/13/2018 07:27	WG1180358
Benzene	ND		0.00100	1	10/13/2018 07:27	WG1180358
Bromobenzene	ND		0.00100	1	10/13/2018 07:27	WG1180358
Bromodichloromethane	ND		0.00100	1	10/13/2018 07:27	WG1180358
Bromoform	ND		0.00100	1	10/13/2018 07:27	WG1180358
Bromomethane	ND		0.00500	1	10/13/2018 07:27	WG1180358
n-Butylbenzene	ND		0.00100	1	10/13/2018 07:27	WG1180358
sec-Butylbenzene	ND		0.00100	1	10/13/2018 07:27	WG1180358
tert-Butylbenzene	ND		0.00100	1	10/13/2018 07:27	WG1180358
Carbon tetrachloride	ND		0.00100	1	10/13/2018 07:27	WG1180358
Chlorobenzene	ND		0.00100	1	10/13/2018 07:27	WG1180358
Chlorodibromomethane	ND		0.00100	1	10/13/2018 07:27	WG1180358
Chloroethane	ND		0.00500	1	10/13/2018 07:27	WG1180358
Chloroform	ND		0.00500	1	10/13/2018 07:27	WG1180358
Chloromethane	ND		0.00250	1	10/13/2018 07:27	WG1180358
2-Chlorotoluene	ND		0.00100	1	10/13/2018 07:27	WG1180358
4-Chlorotoluene	ND		0.00100	1	10/13/2018 07:27	WG1180358
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	10/13/2018 07:27	WG1180358
1,2-Dibromoethane	ND		0.00100	1	10/13/2018 07:27	WG1180358
Dibromomethane	ND		0.00100	1	10/13/2018 07:27	WG1180358
1,2-Dichlorobenzene	ND		0.00100	1	10/13/2018 07:27	WG1180358
1,3-Dichlorobenzene	ND		0.00100	1	10/13/2018 07:27	WG1180358
1,4-Dichlorobenzene	ND		0.00100	1	10/13/2018 07:27	WG1180358
Dichlorodifluoromethane	ND		0.00500	1	10/13/2018 07:27	WG1180358
1,1-Dichloroethane	ND		0.00100	1	10/13/2018 07:27	WG1180358
1,2-Dichloroethane	ND		0.00100	1	10/13/2018 07:27	WG1180358
1,1-Dichloroethene	ND		0.00100	1	10/13/2018 07:27	WG1180358
cis-1,2-Dichloroethene	ND		0.00100	1	10/13/2018 07:27	WG1180358
trans-1,2-Dichloroethene	ND		0.00100	1	10/13/2018 07:27	WG1180358
1,2-Dichloropropane	ND		0.00100	1	10/13/2018 07:27	WG1180358
1,1-Dichloropropene	ND		0.00100	1	10/13/2018 07:27	WG1180358
1,3-Dichloropropane	ND		0.00100	1	10/13/2018 07:27	WG1180358
cis-1,3-Dichloropropene	ND		0.00100	1	10/13/2018 07:27	WG1180358
trans-1,3-Dichloropropene	ND		0.00100	1	10/13/2018 07:27	WG1180358
2,2-Dichloropropane	ND		0.00100	1	10/13/2018 07:27	WG1180358
Di-isopropyl ether	ND		0.00100	1	10/13/2018 07:27	WG1180358
Ethylbenzene	ND		0.00100	1	10/13/2018 07:27	WG1180358
Hexachloro-1,3-butadiene	ND		0.00100	1	10/13/2018 07:27	WG1180358
Isopropylbenzene	ND		0.00100	1	10/13/2018 07:27	WG1180358
p-Isopropyltoluene	ND		0.00100	1	10/13/2018 07:27	WG1180358
2-Butanone (MEK)	ND		0.0100	1	10/13/2018 07:27	WG1180358
Methylene Chloride	ND		0.00500	1	10/13/2018 07:27	WG1180358
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	10/13/2018 07:27	WG1180358
Methyl tert-butyl ether	ND		0.00100	1	10/13/2018 07:27	WG1180358
Naphthalene	ND		0.00500	1	10/13/2018 07:27	WG1180358
n-Propylbenzene	ND		0.00100	1	10/13/2018 07:27	WG1180358
Styrene	ND		0.00100	1	10/13/2018 07:27	WG1180358
1,1,1,2-Tetrachloroethane	ND		0.00100	1	10/13/2018 07:27	WG1180358
1,1,2,2-Tetrachloroethane	ND		0.00100	1	10/13/2018 07:27	WG1180358
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	10/13/2018 07:27	WG1180358
Tetrachloroethene	ND		0.00100	1	10/13/2018 07:27	WG1180358
Toluene	ND		0.00100	1	10/13/2018 07:27	WG1180358
1,2,3-Trichlorobenzene	ND		0.00100	1	10/13/2018 07:27	WG1180358
1,2,4-Trichlorobenzene	ND		0.00100	1	10/13/2018 07:27	WG1180358

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,1,1-Trichloroethane	ND		0.00100	1	10/13/2018 07:27	WG1180358
1,1,2-Trichloroethane	ND		0.00100	1	10/13/2018 07:27	WG1180358
Trichloroethene	ND		0.00100	1	10/13/2018 07:27	WG1180358
Trichlorofluoromethane	ND		0.00500	1	10/13/2018 07:27	WG1180358
1,2,3-Trichloropropane	ND		0.00250	1	10/13/2018 07:27	WG1180358
1,2,4-Trimethylbenzene	ND		0.00100	1	10/13/2018 07:27	WG1180358
1,2,3-Trimethylbenzene	ND		0.00100	1	10/13/2018 07:27	WG1180358
1,3,5-Trimethylbenzene	ND		0.00100	1	10/13/2018 07:27	WG1180358
Vinyl chloride	ND		0.00100	1	10/13/2018 07:27	WG1180358
Xylenes, Total	ND		0.00300	1	10/13/2018 07:27	WG1180358
(S) Toluene-d8	100		80.0-120		10/13/2018 07:27	WG1180358
(S) Dibromofluoromethane	96.9		75.0-120		10/13/2018 07:27	WG1180358
(S) 4-Bromofluorobenzene	101		77.0-126		10/13/2018 07:27	WG1180358

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Acetone	ND		0.0500	1	10/13/2018 07:47	WG1180358
Acrolein	ND		0.0500	1	10/13/2018 07:47	WG1180358
Acrylonitrile	ND		0.0100	1	10/13/2018 07:47	WG1180358
Benzene	ND		0.00100	1	10/13/2018 07:47	WG1180358
Bromobenzene	ND		0.00100	1	10/13/2018 07:47	WG1180358
Bromodichloromethane	ND		0.00100	1	10/13/2018 07:47	WG1180358
Bromoform	ND		0.00100	1	10/13/2018 07:47	WG1180358
Bromomethane	ND		0.00500	1	10/13/2018 07:47	WG1180358
n-Butylbenzene	ND		0.00100	1	10/13/2018 07:47	WG1180358
sec-Butylbenzene	ND		0.00100	1	10/13/2018 07:47	WG1180358
tert-Butylbenzene	ND		0.00100	1	10/13/2018 07:47	WG1180358
Carbon tetrachloride	ND		0.00100	1	10/13/2018 07:47	WG1180358
Chlorobenzene	ND		0.00100	1	10/13/2018 07:47	WG1180358
Chlorodibromomethane	ND		0.00100	1	10/13/2018 07:47	WG1180358
Chloroethane	ND		0.00500	1	10/13/2018 07:47	WG1180358
Chloroform	ND		0.00500	1	10/13/2018 07:47	WG1180358
Chloromethane	ND		0.00250	1	10/13/2018 07:47	WG1180358
2-Chlorotoluene	ND		0.00100	1	10/13/2018 07:47	WG1180358
4-Chlorotoluene	ND		0.00100	1	10/13/2018 07:47	WG1180358
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	10/13/2018 07:47	WG1180358
1,2-Dibromoethane	ND		0.00100	1	10/13/2018 07:47	WG1180358
Dibromomethane	ND		0.00100	1	10/13/2018 07:47	WG1180358
1,2-Dichlorobenzene	ND		0.00100	1	10/13/2018 07:47	WG1180358
1,3-Dichlorobenzene	ND		0.00100	1	10/13/2018 07:47	WG1180358
1,4-Dichlorobenzene	ND		0.00100	1	10/13/2018 07:47	WG1180358
Dichlorodifluoromethane	ND		0.00500	1	10/13/2018 07:47	WG1180358
1,1-Dichloroethane	ND		0.00100	1	10/13/2018 07:47	WG1180358
1,2-Dichloroethane	ND		0.00100	1	10/13/2018 07:47	WG1180358
1,1-Dichloroethene	ND		0.00100	1	10/13/2018 07:47	WG1180358
cis-1,2-Dichloroethene	ND		0.00100	1	10/13/2018 07:47	WG1180358
trans-1,2-Dichloroethene	ND		0.00100	1	10/13/2018 07:47	WG1180358
1,2-Dichloropropane	ND		0.00100	1	10/13/2018 07:47	WG1180358
1,1-Dichloropropene	ND		0.00100	1	10/13/2018 07:47	WG1180358
1,3-Dichloropropane	ND		0.00100	1	10/13/2018 07:47	WG1180358
cis-1,3-Dichloropropene	ND		0.00100	1	10/13/2018 07:47	WG1180358
trans-1,3-Dichloropropene	ND		0.00100	1	10/13/2018 07:47	WG1180358
2,2-Dichloropropane	ND		0.00100	1	10/13/2018 07:47	WG1180358
Di-isopropyl ether	ND		0.00100	1	10/13/2018 07:47	WG1180358
Ethylbenzene	ND		0.00100	1	10/13/2018 07:47	WG1180358
Hexachloro-1,3-butadiene	ND		0.00100	1	10/13/2018 07:47	WG1180358
Isopropylbenzene	ND		0.00100	1	10/13/2018 07:47	WG1180358
p-Isopropyltoluene	ND		0.00100	1	10/13/2018 07:47	WG1180358
2-Butanone (MEK)	ND		0.0100	1	10/13/2018 07:47	WG1180358
Methylene Chloride	ND		0.00500	1	10/13/2018 07:47	WG1180358
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	10/13/2018 07:47	WG1180358
Methyl tert-butyl ether	ND		0.00100	1	10/13/2018 07:47	WG1180358
Naphthalene	ND		0.00500	1	10/13/2018 07:47	WG1180358
n-Propylbenzene	ND		0.00100	1	10/13/2018 07:47	WG1180358
Styrene	ND		0.00100	1	10/13/2018 07:47	WG1180358
1,1,1,2-Tetrachloroethane	ND		0.00100	1	10/13/2018 07:47	WG1180358
1,1,2,2-Tetrachloroethane	ND		0.00100	1	10/13/2018 07:47	WG1180358
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	10/13/2018 07:47	WG1180358
Tetrachloroethene	ND		0.00100	1	10/13/2018 07:47	WG1180358
Toluene	ND		0.00100	1	10/13/2018 07:47	WG1180358
1,2,3-Trichlorobenzene	ND		0.00100	1	10/13/2018 07:47	WG1180358
1,2,4-Trichlorobenzene	ND		0.00100	1	10/13/2018 07:47	WG1180358

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 10/11/18 08:56

L1034216

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,1,1-Trichloroethane	ND		0.00100	1	10/13/2018 07:47	WG1180358
1,1,2-Trichloroethane	ND		0.00100	1	10/13/2018 07:47	WG1180358
Trichloroethene	ND		0.00100	1	10/13/2018 07:47	WG1180358
Trichlorofluoromethane	ND		0.00500	1	10/13/2018 07:47	WG1180358
1,2,3-Trichloropropane	ND		0.00250	1	10/13/2018 07:47	WG1180358
1,2,4-Trimethylbenzene	ND		0.00100	1	10/13/2018 07:47	WG1180358
1,2,3-Trimethylbenzene	ND		0.00100	1	10/13/2018 07:47	WG1180358
1,3,5-Trimethylbenzene	ND		0.00100	1	10/13/2018 07:47	WG1180358
Vinyl chloride	ND		0.00100	1	10/13/2018 07:47	WG1180358
Xylenes, Total	ND		0.00300	1	10/13/2018 07:47	WG1180358
(S) Toluene-d8	98.9		80.0-120		10/13/2018 07:47	WG1180358
(S) Dibromofluoromethane	97.3		75.0-120		10/13/2018 07:47	WG1180358
(S) 4-Bromofluorobenzene	96.2		77.0-126		10/13/2018 07:47	WG1180358

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Acetone	ND		0.0500	1	10/13/2018 08:07	WG1180358
Acrolein	ND		0.0500	1	10/13/2018 08:07	WG1180358
Acrylonitrile	ND		0.0100	1	10/13/2018 08:07	WG1180358
Benzene	ND		0.00100	1	10/13/2018 08:07	WG1180358
Bromobenzene	ND		0.00100	1	10/13/2018 08:07	WG1180358
Bromodichloromethane	ND		0.00100	1	10/13/2018 08:07	WG1180358
Bromoform	ND		0.00100	1	10/13/2018 08:07	WG1180358
Bromomethane	ND		0.00500	1	10/13/2018 08:07	WG1180358
n-Butylbenzene	ND		0.00100	1	10/13/2018 08:07	WG1180358
sec-Butylbenzene	ND		0.00100	1	10/13/2018 08:07	WG1180358
tert-Butylbenzene	ND		0.00100	1	10/13/2018 08:07	WG1180358
Carbon tetrachloride	ND		0.00100	1	10/13/2018 08:07	WG1180358
Chlorobenzene	ND		0.00100	1	10/13/2018 08:07	WG1180358
Chlorodibromomethane	ND		0.00100	1	10/13/2018 08:07	WG1180358
Chloroethane	ND		0.00500	1	10/13/2018 08:07	WG1180358
Chloroform	ND		0.00500	1	10/13/2018 08:07	WG1180358
Chloromethane	ND		0.00250	1	10/13/2018 08:07	WG1180358
2-Chlorotoluene	ND		0.00100	1	10/13/2018 08:07	WG1180358
4-Chlorotoluene	ND		0.00100	1	10/13/2018 08:07	WG1180358
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	10/13/2018 08:07	WG1180358
1,2-Dibromoethane	ND		0.00100	1	10/13/2018 08:07	WG1180358
Dibromomethane	ND		0.00100	1	10/13/2018 08:07	WG1180358
1,2-Dichlorobenzene	ND		0.00100	1	10/13/2018 08:07	WG1180358
1,3-Dichlorobenzene	ND		0.00100	1	10/13/2018 08:07	WG1180358
1,4-Dichlorobenzene	ND		0.00100	1	10/13/2018 08:07	WG1180358
Dichlorodifluoromethane	ND		0.00500	1	10/13/2018 08:07	WG1180358
1,1-Dichloroethane	ND		0.00100	1	10/13/2018 08:07	WG1180358
1,2-Dichloroethane	ND		0.00100	1	10/13/2018 08:07	WG1180358
1,1-Dichloroethene	ND		0.00100	1	10/13/2018 08:07	WG1180358
cis-1,2-Dichloroethene	ND		0.00100	1	10/13/2018 08:07	WG1180358
trans-1,2-Dichloroethene	ND		0.00100	1	10/13/2018 08:07	WG1180358
1,2-Dichloropropane	ND		0.00100	1	10/13/2018 08:07	WG1180358
1,1-Dichloropropene	ND		0.00100	1	10/13/2018 08:07	WG1180358
1,3-Dichloropropane	ND		0.00100	1	10/13/2018 08:07	WG1180358
cis-1,3-Dichloropropene	ND		0.00100	1	10/13/2018 08:07	WG1180358
trans-1,3-Dichloropropene	ND		0.00100	1	10/13/2018 08:07	WG1180358
2,2-Dichloropropane	ND		0.00100	1	10/13/2018 08:07	WG1180358
Di-isopropyl ether	ND		0.00100	1	10/13/2018 08:07	WG1180358
Ethylbenzene	ND		0.00100	1	10/13/2018 08:07	WG1180358
Hexachloro-1,3-butadiene	ND		0.00100	1	10/13/2018 08:07	WG1180358
Isopropylbenzene	ND		0.00100	1	10/13/2018 08:07	WG1180358
p-Isopropyltoluene	ND		0.00100	1	10/13/2018 08:07	WG1180358
2-Butanone (MEK)	ND		0.0100	1	10/13/2018 08:07	WG1180358
Methylene Chloride	ND		0.00500	1	10/13/2018 08:07	WG1180358
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	10/13/2018 08:07	WG1180358
Methyl tert-butyl ether	ND		0.00100	1	10/13/2018 08:07	WG1180358
Naphthalene	ND		0.00500	1	10/13/2018 08:07	WG1180358
n-Propylbenzene	ND		0.00100	1	10/13/2018 08:07	WG1180358
Styrene	ND		0.00100	1	10/13/2018 08:07	WG1180358
1,1,1,2-Tetrachloroethane	ND		0.00100	1	10/13/2018 08:07	WG1180358
1,1,2,2-Tetrachloroethane	ND		0.00100	1	10/13/2018 08:07	WG1180358
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	10/13/2018 08:07	WG1180358
Tetrachloroethene	ND		0.00100	1	10/13/2018 08:07	WG1180358
Toluene	ND		0.00100	1	10/13/2018 08:07	WG1180358
1,2,3-Trichlorobenzene	ND		0.00100	1	10/13/2018 08:07	WG1180358
1,2,4-Trichlorobenzene	ND		0.00100	1	10/13/2018 08:07	WG1180358

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc



Collected date/time: 10/10/18 15:23

L1034216

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,1,1-Trichloroethane	ND		0.00100	1	10/13/2018 08:07	WG1180358
1,1,2-Trichloroethane	ND		0.00100	1	10/13/2018 08:07	WG1180358
Trichloroethene	ND		0.00100	1	10/13/2018 08:07	WG1180358
Trichlorofluoromethane	ND		0.00500	1	10/13/2018 08:07	WG1180358
1,2,3-Trichloropropane	ND		0.00250	1	10/13/2018 08:07	WG1180358
1,2,4-Trimethylbenzene	ND		0.00100	1	10/13/2018 08:07	WG1180358
1,2,3-Trimethylbenzene	ND		0.00100	1	10/13/2018 08:07	WG1180358
1,3,5-Trimethylbenzene	ND		0.00100	1	10/13/2018 08:07	WG1180358
Vinyl chloride	ND		0.00100	1	10/13/2018 08:07	WG1180358
Xylenes, Total	ND		0.00300	1	10/13/2018 08:07	WG1180358
(S) Toluene-d8	98.2		80.0-120		10/13/2018 08:07	WG1180358
(S) Dibromofluoromethane	95.8		75.0-120		10/13/2018 08:07	WG1180358
(S) 4-Bromofluorobenzene	95.6		77.0-126		10/13/2018 08:07	WG1180358

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Acetone	ND		0.0500	1	10/13/2018 08:27	WG1180358
Acrolein	ND		0.0500	1	10/13/2018 08:27	WG1180358
Acrylonitrile	ND		0.0100	1	10/13/2018 08:27	WG1180358
Benzene	ND		0.00100	1	10/13/2018 08:27	WG1180358
Bromobenzene	ND		0.00100	1	10/13/2018 08:27	WG1180358
Bromodichloromethane	ND		0.00100	1	10/13/2018 08:27	WG1180358
Bromoform	ND		0.00100	1	10/13/2018 08:27	WG1180358
Bromomethane	ND		0.00500	1	10/13/2018 08:27	WG1180358
n-Butylbenzene	ND		0.00100	1	10/13/2018 08:27	WG1180358
sec-Butylbenzene	ND		0.00100	1	10/13/2018 08:27	WG1180358
tert-Butylbenzene	ND		0.00100	1	10/13/2018 08:27	WG1180358
Carbon tetrachloride	ND		0.00100	1	10/13/2018 08:27	WG1180358
Chlorobenzene	ND		0.00100	1	10/13/2018 08:27	WG1180358
Chlorodibromomethane	ND		0.00100	1	10/13/2018 08:27	WG1180358
Chloroethane	ND		0.00500	1	10/13/2018 08:27	WG1180358
Chloroform	ND		0.00500	1	10/13/2018 08:27	WG1180358
Chloromethane	ND		0.00250	1	10/13/2018 08:27	WG1180358
2-Chlorotoluene	ND		0.00100	1	10/13/2018 08:27	WG1180358
4-Chlorotoluene	ND		0.00100	1	10/13/2018 08:27	WG1180358
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	10/13/2018 08:27	WG1180358
1,2-Dibromoethane	ND		0.00100	1	10/13/2018 08:27	WG1180358
Dibromomethane	ND		0.00100	1	10/13/2018 08:27	WG1180358
1,2-Dichlorobenzene	ND		0.00100	1	10/13/2018 08:27	WG1180358
1,3-Dichlorobenzene	ND		0.00100	1	10/13/2018 08:27	WG1180358
1,4-Dichlorobenzene	ND		0.00100	1	10/13/2018 08:27	WG1180358
Dichlorodifluoromethane	ND		0.00500	1	10/13/2018 08:27	WG1180358
1,1-Dichloroethane	ND		0.00100	1	10/13/2018 08:27	WG1180358
1,2-Dichloroethane	ND		0.00100	1	10/13/2018 08:27	WG1180358
1,1-Dichloroethene	ND		0.00100	1	10/13/2018 08:27	WG1180358
cis-1,2-Dichloroethene	ND		0.00100	1	10/13/2018 08:27	WG1180358
trans-1,2-Dichloroethene	ND		0.00100	1	10/13/2018 08:27	WG1180358
1,2-Dichloropropane	ND		0.00100	1	10/13/2018 08:27	WG1180358
1,1-Dichloropropene	ND		0.00100	1	10/13/2018 08:27	WG1180358
1,3-Dichloropropane	ND		0.00100	1	10/13/2018 08:27	WG1180358
cis-1,3-Dichloropropene	ND		0.00100	1	10/13/2018 08:27	WG1180358
trans-1,3-Dichloropropene	ND		0.00100	1	10/13/2018 08:27	WG1180358
2,2-Dichloropropane	ND		0.00100	1	10/13/2018 08:27	WG1180358
Di-isopropyl ether	ND		0.00100	1	10/13/2018 08:27	WG1180358
Ethylbenzene	ND		0.00100	1	10/13/2018 08:27	WG1180358
Hexachloro-1,3-butadiene	ND		0.00100	1	10/13/2018 08:27	WG1180358
Isopropylbenzene	ND		0.00100	1	10/13/2018 08:27	WG1180358
p-Isopropyltoluene	ND		0.00100	1	10/13/2018 08:27	WG1180358
2-Butanone (MEK)	ND		0.0100	1	10/13/2018 08:27	WG1180358
Methylene Chloride	ND		0.00500	1	10/13/2018 08:27	WG1180358
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	10/13/2018 08:27	WG1180358
Methyl tert-butyl ether	ND		0.00100	1	10/13/2018 08:27	WG1180358
Naphthalene	ND		0.00500	1	10/13/2018 08:27	WG1180358
n-Propylbenzene	ND		0.00100	1	10/13/2018 08:27	WG1180358
Styrene	ND		0.00100	1	10/13/2018 08:27	WG1180358
1,1,1,2-Tetrachloroethane	ND		0.00100	1	10/13/2018 08:27	WG1180358
1,1,2,2-Tetrachloroethane	ND		0.00100	1	10/13/2018 08:27	WG1180358
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	10/13/2018 08:27	WG1180358
Tetrachloroethene	ND		0.00100	1	10/13/2018 08:27	WG1180358
Toluene	ND		0.00100	1	10/13/2018 08:27	WG1180358
1,2,3-Trichlorobenzene	ND		0.00100	1	10/13/2018 08:27	WG1180358
1,2,4-Trichlorobenzene	ND		0.00100	1	10/13/2018 08:27	WG1180358

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 10/08/18 15:20

L1034216

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,1,1-Trichloroethane	ND		0.00100	1	10/13/2018 08:27	WG1180358
1,1,2-Trichloroethane	ND		0.00100	1	10/13/2018 08:27	WG1180358
Trichloroethene	ND		0.00100	1	10/13/2018 08:27	WG1180358
Trichlorofluoromethane	ND		0.00500	1	10/13/2018 08:27	WG1180358
1,2,3-Trichloropropane	ND		0.00250	1	10/13/2018 08:27	WG1180358
1,2,4-Trimethylbenzene	ND		0.00100	1	10/13/2018 08:27	WG1180358
1,2,3-Trimethylbenzene	ND		0.00100	1	10/13/2018 08:27	WG1180358
1,3,5-Trimethylbenzene	ND		0.00100	1	10/13/2018 08:27	WG1180358
Vinyl chloride	ND		0.00100	1	10/13/2018 08:27	WG1180358
Xylenes, Total	ND		0.00300	1	10/13/2018 08:27	WG1180358
(S) Toluene-d8	101		80.0-120		10/13/2018 08:27	WG1180358
(S) Dibromofluoromethane	96.5		75.0-120		10/13/2018 08:27	WG1180358
(S) 4-Bromofluorobenzene	100		77.0-126		10/13/2018 08:27	WG1180358

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Acetone	ND		0.0500	1	10/13/2018 08:47	WG1180358
Acrolein	ND		0.0500	1	10/13/2018 08:47	WG1180358
Acrylonitrile	ND		0.0100	1	10/13/2018 08:47	WG1180358
Benzene	ND		0.00100	1	10/13/2018 08:47	WG1180358
Bromobenzene	ND		0.00100	1	10/13/2018 08:47	WG1180358
Bromodichloromethane	ND		0.00100	1	10/13/2018 08:47	WG1180358
Bromoform	ND		0.00100	1	10/13/2018 08:47	WG1180358
Bromomethane	ND		0.00500	1	10/13/2018 08:47	WG1180358
n-Butylbenzene	ND		0.00100	1	10/13/2018 08:47	WG1180358
sec-Butylbenzene	ND		0.00100	1	10/13/2018 08:47	WG1180358
tert-Butylbenzene	ND		0.00100	1	10/13/2018 08:47	WG1180358
Carbon tetrachloride	ND		0.00100	1	10/13/2018 08:47	WG1180358
Chlorobenzene	ND		0.00100	1	10/13/2018 08:47	WG1180358
Chlorodibromomethane	ND		0.00100	1	10/13/2018 08:47	WG1180358
Chloroethane	ND		0.00500	1	10/13/2018 08:47	WG1180358
Chloroform	ND		0.00500	1	10/13/2018 08:47	WG1180358
Chloromethane	ND		0.00250	1	10/13/2018 08:47	WG1180358
2-Chlorotoluene	ND		0.00100	1	10/13/2018 08:47	WG1180358
4-Chlorotoluene	ND		0.00100	1	10/13/2018 08:47	WG1180358
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	10/13/2018 08:47	WG1180358
1,2-Dibromoethane	ND		0.00100	1	10/13/2018 08:47	WG1180358
Dibromomethane	ND		0.00100	1	10/13/2018 08:47	WG1180358
1,2-Dichlorobenzene	ND		0.00100	1	10/13/2018 08:47	WG1180358
1,3-Dichlorobenzene	ND		0.00100	1	10/13/2018 08:47	WG1180358
1,4-Dichlorobenzene	ND		0.00100	1	10/13/2018 08:47	WG1180358
Dichlorodifluoromethane	ND		0.00500	1	10/13/2018 08:47	WG1180358
1,1-Dichloroethane	ND		0.00100	1	10/13/2018 08:47	WG1180358
1,2-Dichloroethane	ND		0.00100	1	10/13/2018 08:47	WG1180358
1,1-Dichloroethene	ND		0.00100	1	10/13/2018 08:47	WG1180358
cis-1,2-Dichloroethene	ND		0.00100	1	10/13/2018 08:47	WG1180358
trans-1,2-Dichloroethene	ND		0.00100	1	10/13/2018 08:47	WG1180358
1,2-Dichloropropane	ND		0.00100	1	10/13/2018 08:47	WG1180358
1,1-Dichloropropene	ND		0.00100	1	10/13/2018 08:47	WG1180358
1,3-Dichloropropane	ND		0.00100	1	10/13/2018 08:47	WG1180358
cis-1,3-Dichloropropene	ND		0.00100	1	10/13/2018 08:47	WG1180358
trans-1,3-Dichloropropene	ND		0.00100	1	10/13/2018 08:47	WG1180358
2,2-Dichloropropane	ND		0.00100	1	10/13/2018 08:47	WG1180358
Di-isopropyl ether	ND		0.00100	1	10/13/2018 08:47	WG1180358
Ethylbenzene	ND		0.00100	1	10/13/2018 08:47	WG1180358
Hexachloro-1,3-butadiene	ND		0.00100	1	10/13/2018 08:47	WG1180358
Isopropylbenzene	ND		0.00100	1	10/13/2018 08:47	WG1180358
p-Isopropyltoluene	ND		0.00100	1	10/13/2018 08:47	WG1180358
2-Butanone (MEK)	ND		0.0100	1	10/13/2018 08:47	WG1180358
Methylene Chloride	ND		0.00500	1	10/13/2018 08:47	WG1180358
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	10/13/2018 08:47	WG1180358
Methyl tert-butyl ether	ND		0.00100	1	10/13/2018 08:47	WG1180358
Naphthalene	ND		0.00500	1	10/13/2018 08:47	WG1180358
n-Propylbenzene	ND		0.00100	1	10/13/2018 08:47	WG1180358
Styrene	ND		0.00100	1	10/13/2018 08:47	WG1180358
1,1,1,2-Tetrachloroethane	ND		0.00100	1	10/13/2018 08:47	WG1180358
1,1,2,2-Tetrachloroethane	ND		0.00100	1	10/13/2018 08:47	WG1180358
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	10/13/2018 08:47	WG1180358
Tetrachloroethene	ND		0.00100	1	10/13/2018 08:47	WG1180358
Toluene	ND		0.00100	1	10/13/2018 08:47	WG1180358
1,2,3-Trichlorobenzene	ND		0.00100	1	10/13/2018 08:47	WG1180358
1,2,4-Trichlorobenzene	ND		0.00100	1	10/13/2018 08:47	WG1180358

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 10/09/18 10:45

L1034216

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,1,1-Trichloroethane	ND		0.00100	1	10/13/2018 08:47	WG1180358
1,1,2-Trichloroethane	ND		0.00100	1	10/13/2018 08:47	WG1180358
Trichloroethene	ND		0.00100	1	10/13/2018 08:47	WG1180358
Trichlorofluoromethane	ND		0.00500	1	10/13/2018 08:47	WG1180358
1,2,3-Trichloropropane	ND		0.00250	1	10/13/2018 08:47	WG1180358
1,2,4-Trimethylbenzene	ND		0.00100	1	10/13/2018 08:47	WG1180358
1,2,3-Trimethylbenzene	ND		0.00100	1	10/13/2018 08:47	WG1180358
1,3,5-Trimethylbenzene	ND		0.00100	1	10/13/2018 08:47	WG1180358
Vinyl chloride	ND		0.00100	1	10/13/2018 08:47	WG1180358
Xylenes, Total	ND		0.00300	1	10/13/2018 08:47	WG1180358
(S) Toluene-d8	97.8		80.0-120		10/13/2018 08:47	WG1180358
(S) Dibromofluoromethane	95.8		75.0-120		10/13/2018 08:47	WG1180358
(S) 4-Bromofluorobenzene	96.8		77.0-126		10/13/2018 08:47	WG1180358

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 10/08/18 00:00

L1034216

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Acetone	ND		0.0500	1	10/23/2018 13:55	WG1184957
Acrolein	ND		0.0500	1	10/23/2018 13:55	WG1184957
Acrylonitrile	ND		0.0100	1	10/23/2018 13:55	WG1184957
Benzene	ND		0.00100	1	10/23/2018 13:55	WG1184957
Bromobenzene	ND		0.00100	1	10/23/2018 13:55	WG1184957
Bromodichloromethane	ND		0.00100	1	10/23/2018 13:55	WG1184957
Bromoform	ND		0.00100	1	10/23/2018 13:55	WG1184957
Bromomethane	ND		0.00500	1	10/23/2018 13:55	WG1184957
n-Butylbenzene	ND		0.00100	1	10/23/2018 13:55	WG1184957
sec-Butylbenzene	ND		0.00100	1	10/23/2018 13:55	WG1184957
tert-Butylbenzene	ND		0.00100	1	10/23/2018 13:55	WG1184957
Carbon tetrachloride	ND		0.00100	1	10/23/2018 13:55	WG1184957
Chlorobenzene	ND		0.00100	1	10/23/2018 13:55	WG1184957
Chlorodibromomethane	ND		0.00100	1	10/23/2018 13:55	WG1184957
Chloroethane	ND		0.00500	1	10/23/2018 13:55	WG1184957
Chloroform	ND		0.00500	1	10/23/2018 13:55	WG1184957
Chloromethane	ND		0.00250	1	10/23/2018 13:55	WG1184957
2-Chlorotoluene	ND		0.00100	1	10/23/2018 13:55	WG1184957
4-Chlorotoluene	ND		0.00100	1	10/23/2018 13:55	WG1184957
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	10/23/2018 13:55	WG1184957
1,2-Dibromoethane	ND		0.00100	1	10/23/2018 13:55	WG1184957
Dibromomethane	ND		0.00100	1	10/23/2018 13:55	WG1184957
1,2-Dichlorobenzene	ND		0.00100	1	10/23/2018 13:55	WG1184957
1,3-Dichlorobenzene	ND		0.00100	1	10/23/2018 13:55	WG1184957
1,4-Dichlorobenzene	ND		0.00100	1	10/23/2018 13:55	WG1184957
Dichlorodifluoromethane	ND		0.00500	1	10/23/2018 13:55	WG1184957
1,1-Dichloroethane	ND		0.00100	1	10/23/2018 13:55	WG1184957
1,2-Dichloroethane	ND		0.00100	1	10/23/2018 13:55	WG1184957
1,1-Dichloroethene	ND		0.00100	1	10/23/2018 13:55	WG1184957
cis-1,2-Dichloroethene	ND		0.00100	1	10/23/2018 13:55	WG1184957
trans-1,2-Dichloroethene	ND		0.00100	1	10/23/2018 13:55	WG1184957
1,2-Dichloropropane	ND		0.00100	1	10/23/2018 13:55	WG1184957
1,1-Dichloropropene	ND		0.00100	1	10/23/2018 13:55	WG1184957
1,3-Dichloropropane	ND		0.00100	1	10/23/2018 13:55	WG1184957
cis-1,3-Dichloropropene	ND		0.00100	1	10/23/2018 13:55	WG1184957
trans-1,3-Dichloropropene	ND		0.00100	1	10/23/2018 13:55	WG1184957
2,2-Dichloropropane	ND		0.00100	1	10/23/2018 13:55	WG1184957
Di-isopropyl ether	ND		0.00100	1	10/23/2018 13:55	WG1184957
Ethylbenzene	ND		0.00100	1	10/23/2018 13:55	WG1184957
Hexachloro-1,3-butadiene	ND		0.00100	1	10/23/2018 13:55	WG1184957
Isopropylbenzene	ND		0.00100	1	10/23/2018 13:55	WG1184957
p-Isopropyltoluene	ND		0.00100	1	10/23/2018 13:55	WG1184957
2-Butanone (MEK)	ND		0.0100	1	10/23/2018 13:55	WG1184957
Methylene Chloride	ND		0.00500	1	10/23/2018 13:55	WG1184957
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	10/23/2018 13:55	WG1184957
Methyl tert-butyl ether	ND		0.00100	1	10/23/2018 13:55	WG1184957
Naphthalene	ND		0.00500	1	10/23/2018 13:55	WG1184957
n-Propylbenzene	ND		0.00100	1	10/23/2018 13:55	WG1184957
Styrene	ND		0.00100	1	10/23/2018 13:55	WG1184957
1,1,1,2-Tetrachloroethane	ND		0.00100	1	10/23/2018 13:55	WG1184957
1,1,2,2-Tetrachloroethane	ND		0.00100	1	10/23/2018 13:55	WG1184957
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	10/23/2018 13:55	WG1184957
Tetrachloroethene	ND		0.00100	1	10/23/2018 13:55	WG1184957
Toluene	ND		0.00100	1	10/23/2018 13:55	WG1184957
1,2,3-Trichlorobenzene	ND		0.00100	1	10/23/2018 13:55	WG1184957
1,2,4-Trichlorobenzene	ND		0.00100	1	10/23/2018 13:55	WG1184957

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 10/08/18 00:00

L1034216

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,1,1-Trichloroethane	ND		0.00100	1	10/23/2018 13:55	WG1184957
1,1,2-Trichloroethane	ND		0.00100	1	10/23/2018 13:55	WG1184957
Trichloroethene	ND		0.00100	1	10/23/2018 13:55	WG1184957
Trichlorofluoromethane	ND		0.00500	1	10/23/2018 13:55	WG1184957
1,2,3-Trichloropropane	ND		0.00250	1	10/23/2018 13:55	WG1184957
1,2,4-Trimethylbenzene	ND		0.00100	1	10/23/2018 13:55	WG1184957
1,2,3-Trimethylbenzene	ND		0.00100	1	10/23/2018 13:55	WG1184957
1,3,5-Trimethylbenzene	ND		0.00100	1	10/23/2018 13:55	WG1184957
Vinyl chloride	ND		0.00100	1	10/23/2018 13:55	WG1184957
Xylenes, Total	ND		0.00300	1	10/23/2018 13:55	WG1184957
(S) Toluene-d8	102		80.0-120		10/23/2018 13:55	WG1184957
(S) Dibromofluoromethane	92.6		75.0-120		10/23/2018 13:55	WG1184957
(S) 4-Bromofluorobenzene	96.3		77.0-126		10/23/2018 13:55	WG1184957

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Collected date/time: 10/08/18 00:00

L1034216

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Acetone	ND		0.0500	1	10/23/2018 14:14	WG1184957
Acrolein	ND		0.0500	1	10/23/2018 14:14	WG1184957
Acrylonitrile	ND		0.0100	1	10/23/2018 14:14	WG1184957
Benzene	ND		0.00100	1	10/23/2018 14:14	WG1184957
Bromobenzene	ND		0.00100	1	10/23/2018 14:14	WG1184957
Bromodichloromethane	ND		0.00100	1	10/23/2018 14:14	WG1184957
Bromoform	ND		0.00100	1	10/23/2018 14:14	WG1184957
Bromomethane	ND		0.00500	1	10/23/2018 14:14	WG1184957
n-Butylbenzene	ND		0.00100	1	10/23/2018 14:14	WG1184957
sec-Butylbenzene	ND		0.00100	1	10/23/2018 14:14	WG1184957
tert-Butylbenzene	ND		0.00100	1	10/23/2018 14:14	WG1184957
Carbon tetrachloride	ND		0.00100	1	10/23/2018 14:14	WG1184957
Chlorobenzene	ND		0.00100	1	10/23/2018 14:14	WG1184957
Chlorodibromomethane	ND		0.00100	1	10/23/2018 14:14	WG1184957
Chloroethane	ND		0.00500	1	10/23/2018 14:14	WG1184957
Chloroform	ND		0.00500	1	10/23/2018 14:14	WG1184957
Chloromethane	ND		0.00250	1	10/23/2018 14:14	WG1184957
2-Chlorotoluene	ND		0.00100	1	10/23/2018 14:14	WG1184957
4-Chlorotoluene	ND		0.00100	1	10/23/2018 14:14	WG1184957
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	10/23/2018 14:14	WG1184957
1,2-Dibromoethane	ND		0.00100	1	10/23/2018 14:14	WG1184957
Dibromomethane	ND		0.00100	1	10/23/2018 14:14	WG1184957
1,2-Dichlorobenzene	ND		0.00100	1	10/23/2018 14:14	WG1184957
1,3-Dichlorobenzene	ND		0.00100	1	10/23/2018 14:14	WG1184957
1,4-Dichlorobenzene	ND		0.00100	1	10/23/2018 14:14	WG1184957
Dichlorodifluoromethane	ND		0.00500	1	10/23/2018 14:14	WG1184957
1,1-Dichloroethane	ND		0.00100	1	10/23/2018 14:14	WG1184957
1,2-Dichloroethane	ND		0.00100	1	10/23/2018 14:14	WG1184957
1,1-Dichloroethene	ND		0.00100	1	10/23/2018 14:14	WG1184957
cis-1,2-Dichloroethene	ND		0.00100	1	10/23/2018 14:14	WG1184957
trans-1,2-Dichloroethene	ND		0.00100	1	10/23/2018 14:14	WG1184957
1,2-Dichloropropane	ND		0.00100	1	10/23/2018 14:14	WG1184957
1,1-Dichloropropene	ND		0.00100	1	10/23/2018 14:14	WG1184957
1,3-Dichloropropane	ND		0.00100	1	10/23/2018 14:14	WG1184957
cis-1,3-Dichloropropene	ND		0.00100	1	10/23/2018 14:14	WG1184957
trans-1,3-Dichloropropene	ND		0.00100	1	10/23/2018 14:14	WG1184957
2,2-Dichloropropane	ND		0.00100	1	10/23/2018 14:14	WG1184957
Di-isopropyl ether	ND		0.00100	1	10/23/2018 14:14	WG1184957
Ethylbenzene	ND		0.00100	1	10/23/2018 14:14	WG1184957
Hexachloro-1,3-butadiene	ND		0.00100	1	10/23/2018 14:14	WG1184957
Isopropylbenzene	ND		0.00100	1	10/23/2018 14:14	WG1184957
p-Isopropyltoluene	ND		0.00100	1	10/23/2018 14:14	WG1184957
2-Butanone (MEK)	ND		0.0100	1	10/23/2018 14:14	WG1184957
Methylene Chloride	ND		0.00500	1	10/23/2018 14:14	WG1184957
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	10/23/2018 14:14	WG1184957
Methyl tert-butyl ether	ND		0.00100	1	10/23/2018 14:14	WG1184957
Naphthalene	ND		0.00500	1	10/23/2018 14:14	WG1184957
n-Propylbenzene	ND		0.00100	1	10/23/2018 14:14	WG1184957
Styrene	ND		0.00100	1	10/23/2018 14:14	WG1184957
1,1,1,2-Tetrachloroethane	ND		0.00100	1	10/23/2018 14:14	WG1184957
1,1,2,2-Tetrachloroethane	ND		0.00100	1	10/23/2018 14:14	WG1184957
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	10/23/2018 14:14	WG1184957
Tetrachloroethene	ND		0.00100	1	10/23/2018 14:14	WG1184957
Toluene	ND		0.00100	1	10/23/2018 14:14	WG1184957
1,2,3-Trichlorobenzene	ND		0.00100	1	10/23/2018 14:14	WG1184957
1,2,4-Trichlorobenzene	ND		0.00100	1	10/23/2018 14:14	WG1184957

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Collected date/time: 10/08/18 00:00

L1034216

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,1,1-Trichloroethane	ND		0.00100	1	10/23/2018 14:14	WG1184957
1,1,2-Trichloroethane	ND		0.00100	1	10/23/2018 14:14	WG1184957
Trichloroethene	ND		0.00100	1	10/23/2018 14:14	WG1184957
Trichlorofluoromethane	ND		0.00500	1	10/23/2018 14:14	WG1184957
1,2,3-Trichloropropane	ND		0.00250	1	10/23/2018 14:14	WG1184957
1,2,4-Trimethylbenzene	ND		0.00100	1	10/23/2018 14:14	WG1184957
1,2,3-Trimethylbenzene	ND		0.00100	1	10/23/2018 14:14	WG1184957
1,3,5-Trimethylbenzene	ND		0.00100	1	10/23/2018 14:14	WG1184957
Vinyl chloride	ND		0.00100	1	10/23/2018 14:14	WG1184957
Xylenes, Total	ND		0.00300	1	10/23/2018 14:14	WG1184957
(S) Toluene-d8	103		80.0-120		10/23/2018 14:14	WG1184957
(S) Dibromofluoromethane	94.8		75.0-120		10/23/2018 14:14	WG1184957
(S) 4-Bromofluorobenzene	95.7		77.0-126		10/23/2018 14:14	WG1184957

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3352228-1 10/19/18 13:00

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Cyanide	U		0.00180	0.00500

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L1034199-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1034199-11 10/19/18 13:09 • (DUP) R3352228-6 10/19/18 13:12

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Cyanide	U	0.00188	1	200	J P1	20

L1034304-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1034304-01 10/19/18 13:25 • (DUP) R3352228-7 10/19/18 13:26

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Cyanide	0.00997	0.0114	1	13.4		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3352228-2 10/19/18 13:01 • (LCSD) R3352228-3 10/19/18 13:02

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Cyanide	0.100	0.108	0.105	108	105	85.0-115			2.82	20

L1034169-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1034169-01 10/19/18 13:06 • (MS) R3352228-4 10/19/18 13:07 • (MSD) R3352228-5 10/19/18 13:08

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Cyanide	0.100	ND	0.111	0.0939	111	93.9	1	75.0-125			16.7	20

L1034313-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1034313-02 10/19/18 13:28 • (MS) R3352228-8 10/19/18 13:29 • (MSD) R3352228-9 10/19/18 13:30

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Cyanide	0.100	0.0115	0.0760	0.0679	64.5	56.4	1	75.0-125	J6	J6	11.3	20



Method Blank (MB)

(MB) R3351951-1 10/18/18 16:22

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Cyanide	U		0.0390	0.250

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1033883-30 Original Sample (OS) • Duplicate (DUP)

(OS) L1033883-30 10/18/18 16:29 • (DUP) R3351951-4 10/18/18 16:30

Analyte	Original Result (dry)	DUP Result (dry)	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Cyanide	0.526	0.703	1	28.8	P1	20

L1034199-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1034199-01 10/18/18 16:42 • (DUP) R3351951-7 10/18/18 16:43

Analyte	Original Result (dry)	DUP Result (dry)	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Cyanide	U	0.000	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3351951-2 10/18/18 16:23 • (LCSD) R3351951-3 10/18/18 16:24

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Cyanide	2.50	2.61	2.75	104	110	50.0-150			5.40	20

L1033883-31 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1033883-31 10/18/18 16:31 • (MS) R3351951-5 10/18/18 16:34 • (MSD) R3351951-6 10/18/18 16:35

Analyte	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Cyanide	1.79	0.473	1.60	1.71	62.8	68.7	1	75.0-125	J6	J6	6.46	20



L1034199-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1034199-02 10/18/18 16:46 • (MS) R3351951-8 10/18/18 16:47 • (MSD) R3351951-9 10/18/18 16:48

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cyanide	1.94	U	1.91	1.28	98.6	66.2	1	75.0-125		<u>J3 J6</u>	39.4	20

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3352429-1 10/20/18 12:28

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Cyanide	U		0.0390	0.250

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L1034270-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1034270-01 10/20/18 12:36 • (DUP) R3352429-4 10/20/18 12:37

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Cyanide	ND	0.000	1	0.000		20

L1034573-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1034573-01 10/20/18 12:58 • (DUP) R3352429-7 10/20/18 12:59

Analyte	Original Result (dry)	DUP Result (dry)	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Cyanide	0.210	0.000	1	200	P1	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3352429-2 10/20/18 12:29 • (LCSD) R3352429-3 10/20/18 12:30

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Cyanide	2.50	2.59	2.49	104	99.6	50.0-150			3.86	20

L1034573-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1034573-03 10/20/18 12:40 • (MS) R3352429-5 10/20/18 12:41 • (MSD) R3352429-6 10/20/18 12:42

Analyte	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Cyanide	1.71	U	1.39	1.35	81.4	79.1	1	75.0-125			2.86	20



L1034573-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1034573-02 10/20/18 13:00 • (MS) R3352429-8 10/20/18 13:01 • (MSD) R3352429-9 10/20/18 13:02

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cyanide	1.75	U	1.40	1.22	79.8	69.9	1	75.0-125		<u>J6</u>	13.3	20

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3350756-1 10/15/18 13:17

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Mercury	U		0.0000490	0.000200

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3350756-2 10/15/18 13:19 • (LCSD) R3350756-3 10/15/18 13:22

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Mercury	0.00300	0.00300	0.00284	100	94.7	80.0-120			5.50	20

L1034160-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1034160-01 10/15/18 13:24 • (MS) R3350756-4 10/15/18 13:26 • (MSD) R3350756-5 10/15/18 13:29

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Mercury	0.00300	U	0.00217	0.00190	72.5	63.3	1	75.0-125	<u>J6</u>	<u>J6</u>	13.4	20



Method Blank (MB)

(MB) R3351108-1 10/16/18 10:55

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Mercury	U		0.00280	0.0200

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3351108-2 10/16/18 10:57 • (LCSD) R3351108-3 10/16/18 11:00

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Mercury	0.300	0.255	0.253	85.0	84.3	80.0-120			0.926	20

L1034199-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1034199-03 10/16/18 11:03 • (MS) R3351108-4 10/16/18 11:05 • (MSD) R3351108-5 10/16/18 11:08

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.319	0.148	0.368	0.436	68.8	90.1	1	75.0-125	<u>J6</u>		16.9	20

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3351267-1 10/16/18 23:37

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Arsenic	U		0.00650	0.0100
Barium	U		0.00170	0.00500
Cadmium	U		0.000700	0.00200
Chromium	U		0.00140	0.0100
Lead	U		0.00190	0.00500
Selenium	U		0.00740	0.0100
Silver	U		0.00280	0.00500



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3351267-2 10/16/18 23:40 • (LCSD) R3351267-3 10/16/18 23:42

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Arsenic	1.00	0.982	0.963	98.2	96.3	80.0-120			2.00	20
Barium	1.00	1.04	1.02	104	102	80.0-120			1.91	20
Cadmium	1.00	0.992	0.975	99.2	97.5	80.0-120			1.79	20
Chromium	1.00	1.01	1.01	101	101	80.0-120			0.739	20
Lead	1.00	0.996	0.983	99.6	98.3	80.0-120			1.33	20
Selenium	1.00	0.997	0.972	99.7	97.2	80.0-120			2.49	20
Silver	0.200	0.193	0.193	96.3	96.5	80.0-120			0.188	20



L1034160-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1034160-04 10/16/18 23:45 • (MS) R3351267-5 10/16/18 23:50 • (MSD) R3351267-6 10/16/18 23:53

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	1.00	U	1.00	1.02	100	102	1	75.0-125			1.92	20
Barium	1.00	0.672	1.65	1.66	97.6	99.1	1	75.0-125			0.897	20
Cadmium	1.00	U	0.989	1.00	98.9	100	1	75.0-125			1.34	20
Chromium	1.00	U	0.995	1.00	99.5	100	1	75.0-125			0.872	20
Lead	1.00	0.00241	0.987	1.00	98.5	100	1	75.0-125			1.64	20
Selenium	1.00	U	1.02	1.03	102	103	1	75.0-125			1.32	20
Silver	0.200	U	0.194	0.196	97.2	98.2	1	75.0-125			1.07	20



Method Blank (MB)

(MB) R3350909-1 10/16/18 01:36

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.460	2.00
Barium	U		0.170	0.500
Cadmium	U		0.0700	0.500
Chromium	U		0.140	1.00
Lead	U		0.190	0.500
Selenium	U		0.620	2.00
Silver	U		0.120	1.00

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3350909-2 10/16/18 01:38 • (LCSD) R3350909-3 10/16/18 01:41

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Arsenic	100	95.4	88.7	95.4	88.7	80.0-120			7.24	20
Barium	100	101	94.1	101	94.1	80.0-120			7.57	20
Cadmium	100	96.4	89.7	96.4	89.7	80.0-120			7.23	20
Chromium	100	98.8	91.1	98.8	91.1	80.0-120			8.16	20
Lead	100	98.0	90.8	98.0	90.8	80.0-120			7.65	20
Selenium	100	96.1	89.5	96.1	89.5	80.0-120			7.15	20
Silver	20.0	18.6	17.4	93.1	87.2	80.0-120			6.59	20

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L1034199-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1034199-05 10/16/18 01:43 • (MS) R3350909-6 10/16/18 01:51 • (MSD) R3350909-7 10/16/18 01:54

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	114	2.56	105	103	90.2	87.7	1	75.0-125			2.75	20
Barium	114	54.3	205	179	132	109	1	75.0-125	J5		13.8	20
Cadmium	114	U	108	105	94.3	91.6	1	75.0-125			2.91	20
Chromium	114	209	368	326	139	103	1	75.0-125	J5		12.0	20
Lead	114	62.5	178	177	101	101	1	75.0-125			0.203	20
Selenium	114	U	104	102	91.5	89.8	1	75.0-125			1.83	20
Silver	22.8	U	21.2	20.5	92.7	89.6	1	75.0-125			3.41	20



Method Blank (MB)

(MB) R3350408-3 10/13/18 05:04

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
TPH (GC/FID) Low Fraction	U		0.0314	0.100
^(S) a,a,a-Trifluorotoluene(FID)	95.7			78.0-120

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3350408-2 10/13/18 04:15 • (LCSD) R3350408-1 10/13/18 03:38

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	6.17	6.29	112	114	72.0-127			1.92	20
^(S) a,a,a-Trifluorotoluene(FID)				104	104	78.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3351023-5 10/16/18 08:35

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0344	↓	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	99.1			77.0-120

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3351023-3 10/16/18 07:50 • (LCSD) R3351023-4 10/16/18 08:12

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	4.95	5.30	89.9	96.3	72.0-127			6.89	20
(S) a,a,a-Trifluorotoluene(FID)				102	102	77.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3351495-3 10/13/18 04:28

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0100	0.0500
Acrolein	U		0.00887	0.0500
Acrylonitrile	U		0.00187	0.0100
Benzene	U		0.000331	0.00100
Bromobenzene	U		0.000352	0.00100
Bromodichloromethane	U		0.000380	0.00100
Bromoform	U		0.000469	0.00100
Bromomethane	U		0.000866	0.00500
n-Butylbenzene	U		0.000361	0.00100
sec-Butylbenzene	U		0.000365	0.00100
tert-Butylbenzene	U		0.000399	0.00100
Carbon tetrachloride	U		0.000379	0.00100
Chlorobenzene	U		0.000348	0.00100
Chlorodibromomethane	U		0.000327	0.00100
Chloroethane	U		0.000453	0.00500
Chloroform	U		0.000324	0.00500
Chloromethane	U		0.000276	0.00250
2-Chlorotoluene	U		0.000375	0.00100
4-Chlorotoluene	U		0.000351	0.00100
1,2-Dibromo-3-Chloropropane	U		0.00133	0.00500
1,2-Dibromoethane	U		0.000381	0.00100
Dibromomethane	U		0.000346	0.00100
1,2-Dichlorobenzene	U		0.000349	0.00100
1,3-Dichlorobenzene	U		0.000220	0.00100
1,4-Dichlorobenzene	U		0.000274	0.00100
Dichlorodifluoromethane	U		0.000551	0.00500
1,1-Dichloroethane	U		0.000259	0.00100
1,2-Dichloroethane	U		0.000361	0.00100
1,1-Dichloroethene	U		0.000398	0.00100
cis-1,2-Dichloroethene	U		0.000260	0.00100
trans-1,2-Dichloroethene	U		0.000396	0.00100
1,2-Dichloropropane	U		0.000306	0.00100
1,1-Dichloropropene	U		0.000352	0.00100
1,3-Dichloropropane	U		0.000366	0.00100
cis-1,3-Dichloropropene	U		0.000418	0.00100
trans-1,3-Dichloropropene	U		0.000419	0.00100
2,2-Dichloropropane	U		0.000321	0.00100
Di-isopropyl ether	U		0.000320	0.00100
Ethylbenzene	U		0.000384	0.00100
Hexachloro-1,3-butadiene	U		0.000256	0.00100

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3351495-3 10/13/18 04:28

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Isopropylbenzene	U		0.000326	0.00100
p-Isopropyltoluene	U		0.000350	0.00100
2-Butanone (MEK)	U		0.00393	0.0100
Methylene Chloride	U		0.00100	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100
Methyl tert-butyl ether	U		0.000367	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.000349	0.00100
Styrene	U		0.000307	0.00100
1,1,1,2-Tetrachloroethane	U		0.000385	0.00100
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100
Tetrachloroethene	U		0.000372	0.00100
Toluene	U		0.000412	0.00100
1,1,2-Trichlorotrifluoroethane	U		0.000303	0.00100
1,2,3-Trichlorobenzene	U		0.000230	0.00100
1,2,4-Trichlorobenzene	U		0.000355	0.00100
1,1,1-Trichloroethane	U		0.000319	0.00100
1,1,2-Trichloroethane	U		0.000383	0.00100
Trichloroethene	U		0.000398	0.00100
Trichlorofluoromethane	U		0.00120	0.00500
1,2,3-Trichloropropane	U		0.000807	0.00250
1,2,3-Trimethylbenzene	U		0.000321	0.00100
1,2,4-Trimethylbenzene	U		0.000373	0.00100
1,3,5-Trimethylbenzene	U		0.000387	0.00100
Vinyl chloride	U		0.000259	0.00100
Xylenes, Total	U		0.00106	0.00300
(S) Toluene-d8	102			80.0-120
(S) Dibromofluoromethane	100			75.0-120
(S) 4-Bromofluorobenzene	98.3			77.0-126

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3351495-1 10/13/18 03:28 • (LCSD) R3351495-2 10/13/18 03:48

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.125	0.116	0.119	92.6	94.9	19.0-160			2.55	27
Acrolein	0.125	0.130	0.128	104	102	10.0-160			2.14	26
Acrylonitrile	0.125	0.120	0.125	95.7	99.6	55.0-149			4.00	20
Benzene	0.0250	0.0242	0.0234	96.9	93.7	70.0-123			3.32	20



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3351495-1 10/13/18 03:28 • (LCSD) R3351495-2 10/13/18 03:48

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromobenzene	0.0250	0.0237	0.0237	94.9	94.7	73.0-121			0.256	20
Bromodichloromethane	0.0250	0.0229	0.0227	91.5	90.6	75.0-120			0.942	20
Bromoform	0.0250	0.0248	0.0255	99.3	102	68.0-132			2.53	20
Bromomethane	0.0250	0.0195	0.0229	78.0	91.6	10.0-160			16.0	25
n-Butylbenzene	0.0250	0.0258	0.0271	103	108	73.0-125			4.63	20
sec-Butylbenzene	0.0250	0.0240	0.0245	95.8	98.1	75.0-125			2.33	20
tert-Butylbenzene	0.0250	0.0227	0.0241	90.6	96.5	76.0-124			6.26	20
Carbon tetrachloride	0.0250	0.0248	0.0245	99.4	97.9	68.0-126			1.50	20
Chlorobenzene	0.0250	0.0254	0.0258	102	103	80.0-121			1.44	20
Chlorodibromomethane	0.0250	0.0247	0.0244	99.0	97.7	77.0-125			1.32	20
Chloroethane	0.0250	0.0286	0.0262	114	105	47.0-150			8.88	20
Chloroform	0.0250	0.0225	0.0228	89.9	91.2	73.0-120			1.44	20
Chloromethane	0.0250	0.0183	0.0207	73.2	82.9	41.0-142			12.4	20
2-Chlorotoluene	0.0250	0.0247	0.0249	99.0	99.5	76.0-123			0.585	20
4-Chlorotoluene	0.0250	0.0249	0.0260	99.5	104	75.0-122			4.37	20
1,2-Dibromo-3-Chloropropane	0.0250	0.0242	0.0253	96.7	101	58.0-134			4.60	20
1,2-Dibromoethane	0.0250	0.0262	0.0262	105	105	80.0-122			0.320	20
Dibromomethane	0.0250	0.0247	0.0231	98.8	92.5	80.0-120			6.62	20
1,2-Dichlorobenzene	0.0250	0.0250	0.0258	99.9	103	79.0-121			3.15	20
1,3-Dichlorobenzene	0.0250	0.0257	0.0258	103	103	79.0-120			0.398	20
1,4-Dichlorobenzene	0.0250	0.0234	0.0241	93.7	96.2	79.0-120			2.71	20
Dichlorodifluoromethane	0.0250	0.0249	0.0246	99.5	98.5	51.0-149			1.10	20
1,1-Dichloroethane	0.0250	0.0228	0.0215	91.0	86.2	70.0-126			5.52	20
1,2-Dichloroethane	0.0250	0.0240	0.0240	95.8	96.0	70.0-128			0.153	20
1,1-Dichloroethene	0.0250	0.0235	0.0229	93.9	91.7	71.0-124			2.37	20
cis-1,2-Dichloroethene	0.0250	0.0236	0.0223	94.6	89.1	73.0-120			5.94	20
trans-1,2-Dichloroethene	0.0250	0.0231	0.0226	92.4	90.6	73.0-120			1.96	20
1,2-Dichloropropane	0.0250	0.0256	0.0260	103	104	77.0-125			1.32	20
1,1-Dichloropropene	0.0250	0.0258	0.0258	103	103	74.0-126			0.226	20
1,3-Dichloropropane	0.0250	0.0261	0.0257	104	103	80.0-120			1.45	20
cis-1,3-Dichloropropene	0.0250	0.0262	0.0262	105	105	80.0-123			0.0126	20
trans-1,3-Dichloropropene	0.0250	0.0252	0.0242	101	96.7	78.0-124			4.26	20
2,2-Dichloropropane	0.0250	0.0236	0.0233	94.5	93.0	58.0-130			1.55	20
Di-isopropyl ether	0.0250	0.0232	0.0233	92.8	93.1	58.0-138			0.304	20
Ethylbenzene	0.0250	0.0252	0.0246	101	98.6	79.0-123			2.09	20
Hexachloro-1,3-butadiene	0.0250	0.0241	0.0260	96.3	104	54.0-138			7.59	20
Isopropylbenzene	0.0250	0.0234	0.0240	93.8	96.0	76.0-127			2.32	20
p-Isopropyltoluene	0.0250	0.0238	0.0247	95.2	98.8	76.0-125			3.78	20
2-Butanone (MEK)	0.125	0.126	0.126	101	100	44.0-160			0.479	20
Methylene Chloride	0.0250	0.0230	0.0225	91.9	90.0	67.0-120			2.04	20

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3351495-1 10/13/18 03:28 • (LCSD) R3351495-2 10/13/18 03:48

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
4-Methyl-2-pentanone (MIBK)	0.125	0.129	0.132	104	105	68.0-142			1.62	20
Methyl tert-butyl ether	0.0250	0.0239	0.0231	95.5	92.3	68.0-125			3.44	20
Naphthalene	0.0250	0.0237	0.0255	94.8	102	54.0-135			7.38	20
n-Propylbenzene	0.0250	0.0254	0.0260	102	104	77.0-124			2.35	20
Styrene	0.0250	0.0252	0.0259	101	104	73.0-130			2.90	20
1,1,1,2-Tetrachloroethane	0.0250	0.0250	0.0261	99.9	105	75.0-125			4.57	20
1,1,2,2-Tetrachloroethane	0.0250	0.0228	0.0229	91.3	91.4	65.0-130			0.105	20
Tetrachloroethene	0.0250	0.0262	0.0272	105	109	72.0-132			3.75	20
Toluene	0.0250	0.0242	0.0241	96.8	96.4	79.0-120			0.321	20
1,1,2-Trichlorotrifluoroethane	0.0250	0.0245	0.0238	97.9	95.1	69.0-132			2.97	20
1,2,3-Trichlorobenzene	0.0250	0.0246	0.0255	98.2	102	50.0-138			3.97	20
1,2,4-Trichlorobenzene	0.0250	0.0240	0.0243	95.9	97.2	57.0-137			1.34	20
1,1,1-Trichloroethane	0.0250	0.0229	0.0222	91.5	89.0	73.0-124			2.76	20
1,1,2-Trichloroethane	0.0250	0.0247	0.0241	98.7	96.4	80.0-120			2.36	20
Trichloroethene	0.0250	0.0261	0.0255	105	102	78.0-124			2.47	20
Trichlorofluoromethane	0.0250	0.0271	0.0259	108	104	59.0-147			4.30	20
1,2,3-Trichloropropane	0.0250	0.0233	0.0232	93.2	92.6	73.0-130			0.626	20
1,2,3-Trimethylbenzene	0.0250	0.0232	0.0236	92.6	94.4	77.0-120			1.94	20
1,2,4-Trimethylbenzene	0.0250	0.0232	0.0239	92.9	95.5	76.0-121			2.77	20
1,3,5-Trimethylbenzene	0.0250	0.0243	0.0249	97.0	99.5	76.0-122			2.48	20
Vinyl chloride	0.0250	0.0255	0.0266	102	106	67.0-131			4.30	20
Xylenes, Total	0.0750	0.0755	0.0754	101	101	79.0-123			0.133	20
(S) Toluene-d8				101	102	80.0-120				
(S) Dibromofluoromethane				98.2	99.0	75.0-120				
(S) 4-Bromofluorobenzene				97.3	100	77.0-126				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3351646-3 10/12/18 20:29

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.000331	0.00100
Ethylbenzene	U		0.000384	0.00100
Toluene	U		0.000412	0.00100
Xylenes, Total	U		0.00106	0.00300
<i>(S) Toluene-d8</i>	103			80.0-120
<i>(S) Dibromofluoromethane</i>	93.1			75.0-120
<i>(S) a,a,a-Trifluorotoluene</i>	99.6			80.0-120
<i>(S) 4-Bromofluorobenzene</i>	103			77.0-126

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3351646-1 10/12/18 19:12 • (LCSD) R3351646-2 10/12/18 19:31

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.0250	0.0246	0.0245	98.6	97.9	70.0-123			0.663	20
Ethylbenzene	0.0250	0.0254	0.0256	101	102	79.0-123			0.988	20
Toluene	0.0250	0.0254	0.0255	102	102	79.0-120			0.0634	20
Xylenes, Total	0.0750	0.0776	0.0782	103	104	79.0-123			0.770	20
<i>(S) Toluene-d8</i>				103	105	80.0-120				
<i>(S) Dibromofluoromethane</i>				93.9	93.0	75.0-120				
<i>(S) a,a,a-Trifluorotoluene</i>				100	100	80.0-120				
<i>(S) 4-Bromofluorobenzene</i>				100	98.9	77.0-126				



Method Blank (MB)

(MB) R3351777-3 10/17/18 17:12

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0100	0.0500
Acrolein	U		0.00887	0.0500
Acrylonitrile	U		0.00187	0.0100
Benzene	U		0.000331	0.00100
Bromobenzene	U		0.000352	0.00100
Bromodichloromethane	U		0.000380	0.00100
Bromoform	U		0.000469	0.00100
Bromomethane	U		0.000866	0.00500
n-Butylbenzene	U		0.000361	0.00100
sec-Butylbenzene	U		0.000365	0.00100
tert-Butylbenzene	U		0.000399	0.00100
Carbon tetrachloride	U		0.000379	0.00100
Chlorobenzene	U		0.000348	0.00100
Chlorodibromomethane	U		0.000327	0.00100
Chloroethane	U		0.000453	0.00500
Chloroform	U		0.000324	0.00500
Chloromethane	U		0.000276	0.00250
2-Chlorotoluene	U		0.000375	0.00100
4-Chlorotoluene	U		0.000351	0.00100
1,2-Dibromo-3-Chloropropane	U		0.00133	0.00500
1,2-Dibromoethane	U		0.000381	0.00100
Dibromomethane	U		0.000346	0.00100
1,2-Dichlorobenzene	U		0.000349	0.00100
1,3-Dichlorobenzene	U		0.000220	0.00100
1,4-Dichlorobenzene	U		0.000274	0.00100
Dichlorodifluoromethane	U		0.000551	0.00500
1,1-Dichloroethane	U		0.000259	0.00100
1,2-Dichloroethane	U		0.000361	0.00100
1,1-Dichloroethene	U		0.000398	0.00100
cis-1,2-Dichloroethene	U		0.000260	0.00100
trans-1,2-Dichloroethene	U		0.000396	0.00100
1,2-Dichloropropane	U		0.000306	0.00100
1,1-Dichloropropene	U		0.000352	0.00100
1,3-Dichloropropane	U		0.000366	0.00100
cis-1,3-Dichloropropene	U		0.000418	0.00100
trans-1,3-Dichloropropene	U		0.000419	0.00100
2,2-Dichloropropane	U		0.000321	0.00100
Di-isopropyl ether	U		0.000320	0.00100
Ethylbenzene	U		0.000384	0.00100
Hexachloro-1,3-butadiene	U		0.000256	0.00100

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3351777-3 10/17/18 17:12

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Isopropylbenzene	U		0.000326	0.00100
p-Isopropyltoluene	U		0.000350	0.00100
2-Butanone (MEK)	U		0.00393	0.0100
Methylene Chloride	U		0.00100	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100
Methyl tert-butyl ether	U		0.000367	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.000349	0.00100
Styrene	U		0.000307	0.00100
1,1,1,2-Tetrachloroethane	U		0.000385	0.00100
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100
Tetrachloroethene	U		0.000372	0.00100
Toluene	U		0.000412	0.00100
1,1,2-Trichlorotrifluoroethane	U		0.000303	0.00100
1,2,3-Trichlorobenzene	U		0.000230	0.00100
1,2,4-Trichlorobenzene	U		0.000355	0.00100
1,1,1-Trichloroethane	U		0.000319	0.00100
1,1,2-Trichloroethane	U		0.000383	0.00100
Trichloroethene	U		0.000398	0.00100
Trichlorofluoromethane	U		0.00120	0.00500
1,2,3-Trichloropropane	U		0.000807	0.00250
1,2,3-Trimethylbenzene	U		0.000321	0.00100
1,2,4-Trimethylbenzene	U		0.000373	0.00100
1,3,5-Trimethylbenzene	U		0.000387	0.00100
Vinyl chloride	U		0.000259	0.00100
Xylenes, Total	U		0.00106	0.00300
(S) Toluene-d8	107			80.0-120
(S) Dibromofluoromethane	89.1			75.0-120
(S) 4-Bromofluorobenzene	93.3			77.0-126

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3351777-1 10/17/18 15:13 • (LCSD) R3351777-2 10/17/18 15:32

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.125	0.113	0.115	90.4	91.8	19.0-160			1.45	27
Acrolein	0.125	0.106	0.100	85.0	80.4	10.0-160			5.60	26
Acrylonitrile	0.125	0.118	0.121	94.8	96.5	55.0-149			1.80	20
Benzene	0.0250	0.0240	0.0243	96.0	97.2	70.0-123			1.25	20



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3351777-1 10/17/18 15:13 • (LCSD) R3351777-2 10/17/18 15:32

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Bromobenzene	0.0250	0.0229	0.0228	91.6	91.3	73.0-121			0.375	20
Bromodichloromethane	0.0250	0.0246	0.0248	98.4	99.2	75.0-120			0.747	20
Bromoform	0.0250	0.0214	0.0223	85.5	89.3	68.0-132			4.26	20
Bromomethane	0.0250	0.0145	0.0149	58.1	59.5	10.0-160			2.33	25
n-Butylbenzene	0.0250	0.0247	0.0257	98.9	103	73.0-125			3.76	20
sec-Butylbenzene	0.0250	0.0247	0.0251	98.8	100	75.0-125			1.59	20
tert-Butylbenzene	0.0250	0.0241	0.0246	96.4	98.2	76.0-124			1.87	20
Carbon tetrachloride	0.0250	0.0236	0.0223	94.4	89.1	68.0-126			5.67	20
Chlorobenzene	0.0250	0.0256	0.0256	102	102	80.0-121			0.0100	20
Chlorodibromomethane	0.0250	0.0244	0.0249	97.7	99.7	77.0-125			2.00	20
Chloroethane	0.0250	0.0311	0.0305	124	122	47.0-150			1.73	20
Chloroform	0.0250	0.0234	0.0233	93.6	93.2	73.0-120			0.446	20
Chloromethane	0.0250	0.0196	0.0203	78.4	81.4	41.0-142			3.73	20
2-Chlorotoluene	0.0250	0.0235	0.0241	94.0	96.4	76.0-123			2.52	20
4-Chlorotoluene	0.0250	0.0246	0.0243	98.4	97.2	75.0-122			1.27	20
1,2-Dibromo-3-Chloropropane	0.0250	0.0227	0.0221	90.6	88.3	58.0-134			2.57	20
1,2-Dibromoethane	0.0250	0.0260	0.0259	104	104	80.0-122			0.254	20
Dibromomethane	0.0250	0.0252	0.0253	101	101	80.0-120			0.339	20
1,2-Dichlorobenzene	0.0250	0.0249	0.0256	99.4	102	79.0-121			3.02	20
1,3-Dichlorobenzene	0.0250	0.0243	0.0242	97.2	96.9	79.0-120			0.227	20
1,4-Dichlorobenzene	0.0250	0.0240	0.0240	96.0	96.1	79.0-120			0.101	20
Dichlorodifluoromethane	0.0250	0.0225	0.0230	89.9	92.0	51.0-149			2.31	20
1,1-Dichloroethane	0.0250	0.0245	0.0246	98.1	98.3	70.0-126			0.254	20
1,2-Dichloroethane	0.0250	0.0242	0.0252	96.7	101	70.0-128			4.31	20
1,1-Dichloroethene	0.0250	0.0248	0.0253	99.1	101	71.0-124			1.96	20
cis-1,2-Dichloroethene	0.0250	0.0245	0.0251	98.2	100	73.0-120			2.14	20
trans-1,2-Dichloroethene	0.0250	0.0266	0.0270	107	108	73.0-120			1.40	20
1,2-Dichloropropane	0.0250	0.0268	0.0263	107	105	77.0-125			2.07	20
1,1-Dichloropropene	0.0250	0.0253	0.0254	101	102	74.0-126			0.589	20
1,3-Dichloropropane	0.0250	0.0258	0.0263	103	105	80.0-120			1.72	20
cis-1,3-Dichloropropene	0.0250	0.0258	0.0260	103	104	80.0-123			0.731	20
trans-1,3-Dichloropropene	0.0250	0.0241	0.0250	96.3	100	78.0-124			3.89	20
2,2-Dichloropropane	0.0250	0.0222	0.0227	88.9	91.0	58.0-130			2.29	20
Di-isopropyl ether	0.0250	0.0239	0.0246	95.4	98.2	58.0-138			2.90	20
Ethylbenzene	0.0250	0.0265	0.0263	106	105	79.0-123			0.745	20
Hexachloro-1,3-butadiene	0.0250	0.0233	0.0243	93.3	97.1	54.0-138			3.97	20
Isopropylbenzene	0.0250	0.0234	0.0232	93.5	93.0	76.0-127			0.518	20
p-Isopropyltoluene	0.0250	0.0244	0.0244	97.6	97.8	76.0-125			0.167	20
2-Butanone (MEK)	0.125	0.125	0.126	99.8	101	44.0-160			0.857	20
Methylene Chloride	0.0250	0.0222	0.0230	88.7	91.8	67.0-120			3.51	20

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3351777-1 10/17/18 15:13 • (LCSD) R3351777-2 10/17/18 15:32

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
4-Methyl-2-pentanone (MIBK)	0.125	0.123	0.122	98.5	97.8	68.0-142			0.684	20
Methyl tert-butyl ether	0.0250	0.0241	0.0253	96.5	101	68.0-125			4.90	20
Naphthalene	0.0250	0.0219	0.0237	87.6	94.7	54.0-135			7.82	20
n-Propylbenzene	0.0250	0.0236	0.0237	94.6	95.0	77.0-124			0.398	20
Styrene	0.0250	0.0235	0.0237	94.0	94.9	73.0-130			0.880	20
1,1,1,2-Tetrachloroethane	0.0250	0.0254	0.0254	102	101	75.0-125			0.204	20
1,1,2,2-Tetrachloroethane	0.0250	0.0238	0.0235	95.1	94.1	65.0-130			1.14	20
Tetrachloroethene	0.0250	0.0277	0.0270	111	108	72.0-132			2.60	20
Toluene	0.0250	0.0259	0.0253	104	101	79.0-120			2.31	20
1,1,2-Trichlorotrifluoroethane	0.0250	0.0261	0.0268	104	107	69.0-132			2.41	20
1,2,3-Trichlorobenzene	0.0250	0.0227	0.0247	90.7	98.9	50.0-138			8.67	20
1,2,4-Trichlorobenzene	0.0250	0.0225	0.0231	90.1	92.6	57.0-137			2.70	20
1,1,1-Trichloroethane	0.0250	0.0249	0.0242	99.5	96.8	73.0-124			2.79	20
1,1,2-Trichloroethane	0.0250	0.0248	0.0251	99.3	100	80.0-120			1.01	20
Trichloroethene	0.0250	0.0271	0.0263	108	105	78.0-124			2.76	20
Trichlorofluoromethane	0.0250	0.0256	0.0261	102	104	59.0-147			1.90	20
1,2,3-Trichloropropane	0.0250	0.0239	0.0243	95.6	97.2	73.0-130			1.67	20
1,2,3-Trimethylbenzene	0.0250	0.0240	0.0240	95.8	96.1	77.0-120			0.250	20
1,2,4-Trimethylbenzene	0.0250	0.0245	0.0245	98.0	98.1	76.0-121			0.0992	20
1,3,5-Trimethylbenzene	0.0250	0.0233	0.0236	93.2	94.2	76.0-122			1.07	20
Vinyl chloride	0.0250	0.0253	0.0254	101	102	67.0-131			0.412	20
Xylenes, Total	0.0750	0.0784	0.0772	105	103	79.0-123			1.54	20
(S) Toluene-d8				101	100	80.0-120				
(S) Dibromofluoromethane				90.0	91.8	75.0-120				
(S) 4-Bromofluorobenzene				92.0	89.9	77.0-126				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3351820-4 10/18/18 11:36

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
cis-1,2-Dichloroethene	U		0.000260	0.00100
Tetrachloroethene	U		0.000372	0.00100
1,2,3-Trimethylbenzene	U		0.000321	0.00100
1,2,4-Trimethylbenzene	U		0.000373	0.00100
1,3,5-Trimethylbenzene	U		0.000387	0.00100
Xylenes, Total	U		0.00106	0.00300
(S) Toluene-d8	106			80.0-120
(S) Dibromofluoromethane	91.3			75.0-120
(S) 4-Bromofluorobenzene	99.2			77.0-126

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3351820-1 10/18/18 10:18 • (LCSD) R3351820-2 10/18/18 10:38

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
cis-1,2-Dichloroethene	0.0250	0.0216	0.0201	86.3	80.5	73.0-120			6.92	20
Tetrachloroethene	0.0250	0.0254	0.0259	102	104	72.0-132			2.13	20
1,2,3-Trimethylbenzene	0.0250	0.0230	0.0241	91.8	96.4	77.0-120			4.91	20
1,2,4-Trimethylbenzene	0.0250	0.0240	0.0245	95.9	98.1	76.0-121			2.31	20
1,3,5-Trimethylbenzene	0.0250	0.0241	0.0252	96.4	101	76.0-122			4.60	20
Xylenes, Total	0.0750	0.0752	0.0773	100	103	79.0-123			2.75	20
(S) Toluene-d8				103	102	80.0-120				
(S) Dibromofluoromethane				93.3	89.6	75.0-120				
(S) 4-Bromofluorobenzene				97.4	98.3	77.0-126				

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3353099-4 10/23/18 11:16

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0100	0.0500
Acrylonitrile	U		0.00187	0.0100
Acrolein	U		0.00887	0.0500
Benzene	U		0.000331	0.00100
Bromobenzene	U		0.000352	0.00100
Bromodichloromethane	U		0.000380	0.00100
Bromoform	U		0.000469	0.00100
Bromomethane	U		0.000866	0.00500
n-Butylbenzene	U		0.000361	0.00100
sec-Butylbenzene	U		0.000365	0.00100
tert-Butylbenzene	U		0.000399	0.00100
Carbon tetrachloride	U		0.000379	0.00100
Chlorobenzene	U		0.000348	0.00100
Chlorodibromomethane	U		0.000327	0.00100
Chloroethane	U		0.000453	0.00500
Chloroform	U		0.000324	0.00500
Chloromethane	U		0.000276	0.00250
2-Chlorotoluene	U		0.000375	0.00100
4-Chlorotoluene	U		0.000351	0.00100
1,2-Dibromo-3-Chloropropane	U		0.00133	0.00500
1,2-Dibromoethane	U		0.000381	0.00100
Dibromomethane	U		0.000346	0.00100
1,2-Dichlorobenzene	U		0.000349	0.00100
1,3-Dichlorobenzene	U		0.000220	0.00100
1,4-Dichlorobenzene	U		0.000274	0.00100
Dichlorodifluoromethane	U		0.000551	0.00500
1,1-Dichloroethane	U		0.000259	0.00100
1,2-Dichloroethane	U		0.000361	0.00100
1,1-Dichloroethene	U		0.000398	0.00100
cis-1,2-Dichloroethene	U		0.000260	0.00100
trans-1,2-Dichloroethene	U		0.000396	0.00100
1,2-Dichloropropane	U		0.000306	0.00100
1,1-Dichloropropene	U		0.000352	0.00100
1,3-Dichloropropane	U		0.000366	0.00100
cis-1,3-Dichloropropene	U		0.000418	0.00100
trans-1,3-Dichloropropene	U		0.000419	0.00100
2,2-Dichloropropane	U		0.000321	0.00100
Di-isopropyl ether	U		0.000320	0.00100
Ethylbenzene	U		0.000384	0.00100
Hexachloro-1,3-butadiene	U		0.000256	0.00100

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3353099-4 10/23/18 11:16

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Isopropylbenzene	U		0.000326	0.00100
p-Isopropyltoluene	U		0.000350	0.00100
2-Butanone (MEK)	U		0.00393	0.0100
Methylene Chloride	U		0.00100	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100
Methyl tert-butyl ether	U		0.000367	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.000349	0.00100
Styrene	U		0.000307	0.00100
1,1,1,2-Tetrachloroethane	U		0.000385	0.00100
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100
1,1,2-Trichlorotrifluoroethane	U		0.000303	0.00100
Tetrachloroethene	U		0.000372	0.00100
Toluene	U		0.000412	0.00100
1,2,3-Trichlorobenzene	U		0.000230	0.00100
1,2,4-Trichlorobenzene	U		0.000355	0.00100
1,1,1-Trichloroethane	U		0.000319	0.00100
1,1,2-Trichloroethane	U		0.000383	0.00100
Trichloroethene	U		0.000398	0.00100
Trichlorofluoromethane	U		0.00120	0.00500
1,2,3-Trichloropropane	U		0.000807	0.00250
1,2,4-Trimethylbenzene	U		0.000373	0.00100
1,2,3-Trimethylbenzene	U		0.000321	0.00100
1,3,5-Trimethylbenzene	U		0.000387	0.00100
Vinyl chloride	U		0.000259	0.00100
Xylenes, Total	U		0.00106	0.00300
(S) Toluene-d8	102			80.0-120
(S) Dibromofluoromethane	93.3			75.0-120
(S) 4-Bromofluorobenzene	95.5			77.0-126

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3353099-1 10/23/18 09:59 • (LCSD) R3353099-2 10/23/18 10:19

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.125	0.0887	0.0884	71.0	70.7	19.0-160			0.440	27
Acrylonitrile	0.125	0.104	0.102	83.4	81.8	55.0-149			1.89	20
Benzene	0.0250	0.0227	0.0228	90.7	91.2	70.0-123			0.579	20
Bromobenzene	0.0250	0.0242	0.0240	96.8	96.0	73.0-121			0.807	20



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3353099-1 10/23/18 09:59 • (LCSD) R3353099-2 10/23/18 10:19

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Bromodichloromethane	0.0250	0.0233	0.0232	93.2	92.7	75.0-120			0.515	20
Bromoform	0.0250	0.0289	0.0291	116	116	68.0-132			0.692	20
Bromomethane	0.0250	0.0224	0.0206	89.4	82.6	10.0-160			7.97	25
n-Butylbenzene	0.0250	0.0209	0.0212	83.4	84.7	73.0-125			1.54	20
sec-Butylbenzene	0.0250	0.0232	0.0236	92.9	94.5	75.0-125			1.69	20
tert-Butylbenzene	0.0250	0.0248	0.0251	99.3	100	76.0-124			0.982	20
Carbon tetrachloride	0.0250	0.0228	0.0222	91.2	88.6	68.0-126			2.85	20
Chlorobenzene	0.0250	0.0261	0.0267	105	107	80.0-121			1.98	20
Chlorodibromomethane	0.0250	0.0269	0.0270	108	108	77.0-125			0.384	20
Chloroethane	0.0250	0.0198	0.0190	79.3	75.8	47.0-150			4.45	20
Chloroform	0.0250	0.0227	0.0225	91.0	89.8	73.0-120			1.31	20
Chloromethane	0.0250	0.0166	0.0156	66.4	62.6	41.0-142			5.91	20
2-Chlorotoluene	0.0250	0.0252	0.0252	101	101	76.0-123			0.327	20
4-Chlorotoluene	0.0250	0.0248	0.0251	99.2	100	75.0-122			1.25	20
1,2-Dibromo-3-Chloropropane	0.0250	0.0235	0.0236	93.9	94.4	58.0-134			0.562	20
1,2-Dibromoethane	0.0250	0.0251	0.0257	101	103	80.0-122			2.15	20
Dibromomethane	0.0250	0.0234	0.0238	93.6	95.2	80.0-120			1.75	20
1,2-Dichlorobenzene	0.0250	0.0233	0.0241	93.3	96.4	79.0-121			3.34	20
1,3-Dichlorobenzene	0.0250	0.0251	0.0252	100	101	79.0-120			0.656	20
1,4-Dichlorobenzene	0.0250	0.0242	0.0248	96.7	99.0	79.0-120			2.40	20
Dichlorodifluoromethane	0.0250	0.0209	0.0191	83.7	76.4	51.0-149			9.11	20
1,1-Dichloroethane	0.0250	0.0222	0.0220	88.7	88.0	70.0-126			0.816	20
1,2-Dichloroethane	0.0250	0.0203	0.0202	81.2	80.7	70.0-128			0.534	20
1,1-Dichloroethene	0.0250	0.0253	0.0232	101	93.0	71.0-124			8.42	20
cis-1,2-Dichloroethene	0.0250	0.0245	0.0245	98.1	98.1	73.0-120			0.0258	20
trans-1,2-Dichloroethene	0.0250	0.0239	0.0237	95.5	94.7	73.0-120			0.830	20
1,2-Dichloropropane	0.0250	0.0231	0.0236	92.3	94.5	77.0-125			2.28	20
1,1-Dichloropropene	0.0250	0.0222	0.0222	88.9	89.0	74.0-126			0.109	20
1,3-Dichloropropane	0.0250	0.0244	0.0246	97.5	98.6	80.0-120			1.04	20
cis-1,3-Dichloropropene	0.0250	0.0253	0.0260	101	104	80.0-123			2.76	20
trans-1,3-Dichloropropene	0.0250	0.0254	0.0254	102	101	78.0-124			0.158	20
2,2-Dichloropropane	0.0250	0.0226	0.0219	90.3	87.5	58.0-130			3.12	20
Di-isopropyl ether	0.0250	0.0212	0.0208	84.7	83.2	58.0-138			1.89	20
Ethylbenzene	0.0250	0.0253	0.0263	101	105	79.0-123			4.05	20
Hexachloro-1,3-butadiene	0.0250	0.0224	0.0231	89.4	92.3	54.0-138			3.17	20
Isopropylbenzene	0.0250	0.0252	0.0255	101	102	76.0-127			1.05	20
p-Isopropyltoluene	0.0250	0.0234	0.0237	93.7	94.8	76.0-125			1.25	20
2-Butanone (MEK)	0.125	0.0942	0.0938	75.3	75.0	44.0-160			0.381	20
Acrolein	0.125	0.134	0.141	107	113	10.0-160			5.18	26
Methylene Chloride	0.0250	0.0238	0.0221	95.0	88.3	67.0-120			7.36	20

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3353099-1 10/23/18 09:59 • (LCSD) R3353099-2 10/23/18 10:19

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
4-Methyl-2-pentanone (MIBK)	0.125	0.106	0.106	84.4	85.2	68.0-142			0.868	20
Methyl tert-butyl ether	0.0250	0.0226	0.0217	90.5	86.9	68.0-125			4.07	20
Naphthalene	0.0250	0.0213	0.0217	85.1	86.9	54.0-135			2.08	20
n-Propylbenzene	0.0250	0.0245	0.0249	98.0	99.5	77.0-124			1.45	20
Styrene	0.0250	0.0266	0.0270	106	108	73.0-130			1.63	20
1,1,1,2-Tetrachloroethane	0.0250	0.0274	0.0279	110	112	75.0-125			1.87	20
1,1,2,2-Tetrachloroethane	0.0250	0.0262	0.0262	105	105	65.0-130			0.0231	20
1,1,2-Trichlorotrifluoroethane	0.0250	0.0256	0.0254	102	102	69.0-132			0.912	20
Tetrachloroethene	0.0250	0.0271	0.0277	109	111	72.0-132			2.08	20
Toluene	0.0250	0.0246	0.0250	98.5	100	79.0-120			1.59	20
1,2,3-Trichlorobenzene	0.0250	0.0219	0.0227	87.8	90.8	50.0-138			3.34	20
1,2,4-Trichlorobenzene	0.0250	0.0224	0.0228	89.7	91.0	57.0-137			1.53	20
1,1,1-Trichloroethane	0.0250	0.0231	0.0224	92.6	89.7	73.0-124			3.09	20
1,1,2-Trichloroethane	0.0250	0.0256	0.0260	103	104	80.0-120			1.48	20
Trichloroethene	0.0250	0.0252	0.0254	101	101	78.0-124			0.629	20
Trichlorofluoromethane	0.0250	0.0224	0.0209	89.7	83.6	59.0-147			6.97	20
1,2,3-Trichloropropane	0.0250	0.0260	0.0260	104	104	73.0-130			0.152	20
1,2,4-Trimethylbenzene	0.0250	0.0248	0.0249	99.4	99.8	76.0-121			0.420	20
1,2,3-Trimethylbenzene	0.0250	0.0231	0.0231	92.4	92.4	77.0-120			0.0426	20
1,3,5-Trimethylbenzene	0.0250	0.0253	0.0255	101	102	76.0-122			0.744	20
Vinyl chloride	0.0250	0.0207	0.0200	82.9	79.8	67.0-131			3.79	20
Xylenes, Total	0.0750	0.0759	0.0783	101	104	79.0-123			3.11	20
(S) Toluene-d8				101	102	80.0-120				
(S) Dibromofluoromethane				91.6	90.5	75.0-120				
(S) 4-Bromofluorobenzene				95.7	95.9	77.0-126				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3350952-2 10/16/18 03:34

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0137	0.0250
Acrylonitrile	U		0.00190	0.0125
Benzene	U		0.000400	0.00100
Bromobenzene	U		0.00105	0.0125
Bromodichloromethane	U		0.000788	0.00250
Bromoform	U		0.00598	0.0250
Bromomethane	U		0.00370	0.0125
n-Butylbenzene	U		0.00384	0.0125
sec-Butylbenzene	U		0.00253	0.0125
tert-Butylbenzene	U		0.00155	0.00500
Carbon tetrachloride	U		0.00108	0.00500
Chlorobenzene	U		0.000573	0.00250
Chlorodibromomethane	U		0.000450	0.00250
Chloroethane	U		0.00108	0.00500
Chloroform	U		0.000415	0.00250
Chloromethane	U		0.00139	0.0125
2-Chlorotoluene	U		0.000920	0.00250
4-Chlorotoluene	U		0.00113	0.00500
1,2-Dibromo-3-Chloropropane	U		0.00510	0.0250
1,2-Dibromoethane	U		0.000525	0.00250
Dibromomethane	U		0.00100	0.00500
1,2-Dichlorobenzene	U		0.00145	0.00500
1,3-Dichlorobenzene	U		0.00170	0.00500
1,4-Dichlorobenzene	U		0.00197	0.00500
Dichlorodifluoromethane	U		0.000818	0.00250
1,1-Dichloroethane	U		0.000575	0.00250
1,2-Dichloroethane	U		0.000475	0.00250
1,1-Dichloroethene	U		0.000500	0.00250
cis-1,2-Dichloroethene	U		0.000690	0.00250
trans-1,2-Dichloroethene	U		0.00143	0.00500
1,2-Dichloropropane	U		0.00127	0.00500
1,1-Dichloropropene	U		0.000700	0.00250
1,3-Dichloropropane	U		0.00175	0.00500
cis-1,3-Dichloropropene	U		0.000678	0.00250
trans-1,3-Dichloropropene	U		0.00153	0.00500
2,2-Dichloropropane	U		0.000793	0.00250
Di-isopropyl ether	U		0.000350	0.00100
Ethylbenzene	U		0.000530	0.00250
Hexachloro-1,3-butadiene	U		0.0127	0.0250
Isopropylbenzene	U		0.000863	0.00250

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3350952-2 10/16/18 03:34

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
p-Isopropyltoluene	U		0.00233	0.00500
2-Butanone (MEK)	U		0.0125	0.0250
Methylene Chloride	U		0.00664	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.0100	0.0250
Methyl tert-butyl ether	U		0.000295	0.00100
Naphthalene	U		0.00312	0.0125
n-Propylbenzene	U		0.00118	0.00500
Styrene	U		0.00273	0.0125
1,1,1,2-Tetrachloroethane	U		0.000500	0.00250
1,1,2,2-Tetrachloroethane	U		0.000390	0.00250
Tetrachloroethene	U		0.000700	0.00250
Toluene	U		0.00125	0.00500
1,1,2-Trichlorotrifluoroethane	U		0.000675	0.00250
1,2,3-Trichlorobenzene	U		0.000625	0.00250
1,2,4-Trichlorobenzene	U		0.00482	0.0125
1,1,1-Trichloroethane	U		0.000275	0.00250
1,1,2-Trichloroethane	U		0.000883	0.00250
Trichloroethene	U		0.000400	0.00100
Trichlorofluoromethane	U		0.000500	0.00250
1,2,3-Trichloropropane	U		0.00510	0.0125
1,2,3-Trimethylbenzene	U		0.00115	0.00500
1,2,4-Trimethylbenzene	U		0.00116	0.00500
1,3,5-Trimethylbenzene	U		0.00108	0.00500
Vinyl chloride	U		0.000683	0.00250
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	109			75.0-131
(S) Dibromofluoromethane	113			65.0-129
(S) 4-Bromofluorobenzene	103			67.0-138

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3350952-1 10/16/18 02:37

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.625	0.980	157	10.0-160	
Acrylonitrile	0.625	0.954	153	45.0-153	
Benzene	0.125	0.133	106	70.0-123	
Bromobenzene	0.125	0.124	99.2	73.0-121	
Bromodichloromethane	0.125	0.138	111	73.0-121	



Laboratory Control Sample (LCS)

(LCS) R3350952-1 10/16/18 02:37

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Bromoform	0.125	0.122	97.6	64.0-132	
Bromomethane	0.125	0.122	97.4	56.0-147	
n-Butylbenzene	0.125	0.115	92.1	68.0-135	
sec-Butylbenzene	0.125	0.114	91.3	74.0-130	
tert-Butylbenzene	0.125	0.119	95.0	75.0-127	
Carbon tetrachloride	0.125	0.122	97.9	66.0-128	
Chlorobenzene	0.125	0.0921	73.7	76.0-128	J4
Chlorodibromomethane	0.125	0.117	93.7	74.0-127	
Chloroethane	0.125	0.130	104	61.0-134	
Chloroform	0.125	0.127	102	72.0-123	
Chloromethane	0.125	0.140	112	51.0-138	
2-Chlorotoluene	0.125	0.118	94.3	75.0-124	
4-Chlorotoluene	0.125	0.127	101	75.0-124	
1,2-Dibromo-3-Chloropropane	0.125	0.0939	75.1	59.0-130	
1,2-Dibromoethane	0.125	0.120	96.3	74.0-128	
Dibromomethane	0.125	0.126	100	75.0-122	
1,2-Dichlorobenzene	0.125	0.113	90.4	76.0-124	
1,3-Dichlorobenzene	0.125	0.117	93.5	76.0-125	
1,4-Dichlorobenzene	0.125	0.118	94.1	77.0-121	
Dichlorodifluoromethane	0.125	0.0773	61.8	43.0-156	
1,1-Dichloroethane	0.125	0.146	117	70.0-127	
1,2-Dichloroethane	0.125	0.154	123	65.0-131	
1,1-Dichloroethene	0.125	0.136	109	65.0-131	
cis-1,2-Dichloroethene	0.125	0.141	113	73.0-125	
trans-1,2-Dichloroethene	0.125	0.121	97.1	71.0-125	
1,2-Dichloropropane	0.125	0.138	110	74.0-125	
1,1-Dichloropropene	0.125	0.137	109	73.0-125	
1,3-Dichloropropane	0.125	0.129	103	80.0-125	
cis-1,3-Dichloropropene	0.125	0.126	101	76.0-127	
trans-1,3-Dichloropropene	0.125	0.129	103	73.0-127	
2,2-Dichloropropane	0.125	0.129	104	59.0-135	
Di-isopropyl ether	0.125	0.161	129	60.0-136	
Ethylbenzene	0.125	0.109	87.2	74.0-126	
Hexachloro-1,3-butadiene	0.125	0.0931	74.5	57.0-150	
Isopropylbenzene	0.125	0.120	96.1	72.0-127	
p-Isopropyltoluene	0.125	0.109	87.2	72.0-133	
2-Butanone (MEK)	0.625	0.981	157	30.0-160	
Methylene Chloride	0.125	0.142	114	68.0-123	
4-Methyl-2-pentanone (MIBK)	0.625	0.694	111	56.0-143	
Methyl tert-butyl ether	0.125	0.147	118	66.0-132	

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Laboratory Control Sample (LCS)

(LCS) R3350952-1 10/16/18 02:37

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Naphthalene	0.125	0.0956	76.4	59.0-130	
n-Propylbenzene	0.125	0.126	101	74.0-126	
Styrene	0.125	0.118	94.0	72.0-127	
1,1,1,2-Tetrachloroethane	0.125	0.115	92.2	74.0-129	
1,1,2,2-Tetrachloroethane	0.125	0.121	97.0	68.0-128	
Tetrachloroethene	0.125	0.0852	68.2	70.0-136	J4
Toluene	0.125	0.118	94.8	75.0-121	
1,1,2-Trichlorotrifluoroethane	0.125	0.123	98.6	61.0-139	
1,2,3-Trichlorobenzene	0.125	0.0953	76.3	59.0-139	
1,2,4-Trichlorobenzene	0.125	0.0894	71.5	62.0-137	
1,1,1-Trichloroethane	0.125	0.131	105	69.0-126	
1,1,2-Trichloroethane	0.125	0.115	91.7	78.0-123	
Trichloroethene	0.125	0.124	99.0	76.0-126	
Trichlorofluoromethane	0.125	0.104	83.4	61.0-142	
1,2,3-Trichloropropane	0.125	0.128	103	67.0-129	
1,2,3-Trimethylbenzene	0.125	0.119	94.9	74.0-124	
1,2,4-Trimethylbenzene	0.125	0.114	91.3	70.0-126	
1,3,5-Trimethylbenzene	0.125	0.118	94.7	73.0-127	
Vinyl chloride	0.125	0.113	90.6	63.0-134	
Xylenes, Total	0.375	0.303	80.8	72.0-127	
(S) Toluene-d8			109	75.0-131	
(S) Dibromofluoromethane			113	65.0-129	
(S) 4-Bromofluorobenzene			105	67.0-138	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1034203-15 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1034203-15 10/16/18 09:30 • (MS) R3350952-3 10/16/18 13:36 • (MSD) R3350952-4 10/16/18 13:54

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	0.720	ND	0.681	0.625	94.5	86.8	1	10.0-160			8.44	40
Acrylonitrile	0.720	ND	0.827	0.838	115	116	1	10.0-160			1.31	40
Benzene	0.144	ND	0.132	0.0841	91.6	58.4	1	10.0-149	J3		44.4	37
Bromobenzene	0.144	ND	0.132	0.0936	91.3	65.0	1	10.0-156			33.7	38
Bromodichloromethane	0.144	ND	0.162	0.116	112	80.8	1	10.0-143			32.7	37
Bromoform	0.144	ND	0.131	0.116	91.2	80.6	1	10.0-146			12.3	36
Bromomethane	0.144	ND	0.0580	0.0328	40.3	22.8	1	10.0-149	J3		55.4	38
n-Butylbenzene	0.144	ND	0.167	0.103	116	71.6	1	10.0-160	J3		47.0	40
sec-Butylbenzene	0.144	ND	0.148	0.0938	103	65.1	1	10.0-159	J3		45.0	39
tert-Butylbenzene	0.144	ND	0.139	0.0849	96.2	59.0	1	10.0-156	J3		48.0	39



L1034203-15 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1034203-15 10/16/18 09:30 • (MS) R3350952-3 10/16/18 13:36 • (MSD) R3350952-4 10/16/18 13:54

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Carbon tetrachloride	0.144	ND	0.126	0.0667	87.4	46.3	1	10.0-145		J3	61.4	37
Chlorobenzene	0.144	ND	0.100	0.0635	69.5	44.1	1	10.0-152		J3	44.8	39
Chlorodibromomethane	0.144	ND	0.124	0.0963	85.9	66.8	1	10.0-146			25.0	37
Chloroethane	0.144	ND	0.0306	0.0115	21.3	7.99	1	10.0-146		J3 J6	90.7	40
Chloroform	0.144	ND	0.133	0.0847	91.6	57.8	1	10.0-146		J3	44.7	37
Chloromethane	0.144	ND	0.0988	0.0571	68.6	39.6	1	10.0-159		J3	53.5	37
2-Chlorotoluene	0.144	ND	0.137	0.0833	95.0	57.8	1	10.0-159		J3	48.6	38
4-Chlorotoluene	0.144	ND	0.143	0.0932	99.5	64.7	1	10.0-155		J3	42.4	39
1,2-Dibromo-3-Chloropropane	0.144	ND	0.0954	0.102	66.2	71.0	1	10.0-151			6.91	39
1,2-Dibromoethane	0.144	ND	0.119	0.0973	82.8	67.5	1	10.0-148			20.3	34
Dibromomethane	0.144	ND	0.120	0.0972	83.4	67.4	1	10.0-147			21.1	35
1,2-Dichlorobenzene	0.144	ND	0.126	0.0950	87.5	65.9	1	10.0-155			28.1	37
1,3-Dichlorobenzene	0.144	ND	0.136	0.0939	94.5	65.2	1	10.0-153			36.8	38
1,4-Dichlorobenzene	0.144	ND	0.135	0.0955	94.0	66.3	1	10.0-151			34.7	38
Dichlorodifluoromethane	0.144	ND	0.111	0.0514	76.9	35.7	1	10.0-160		J3	73.3	35
1,1-Dichloroethane	0.144	ND	0.157	0.0937	109	65.1	1	10.0-147		J3	50.3	37
1,2-Dichloroethane	0.144	ND	0.150	0.117	104	81.2	1	10.0-148			24.9	35
1,1-Dichloroethene	0.144	ND	0.105	0.0544	72.7	37.8	1	10.0-155		J3	63.1	37
cis-1,2-Dichloroethene	0.144	ND	0.135	0.0876	93.7	60.8	1	10.0-149		J3	42.6	37
trans-1,2-Dichloroethene	0.144	ND	0.0946	0.0486	65.6	33.8	1	10.0-150		J3	64.2	37
1,2-Dichloropropane	0.144	ND	0.148	0.0931	103	64.6	1	10.0-148		J3	45.8	37
1,1-Dichloropropene	0.144	ND	0.111	0.0583	76.9	40.4	1	10.0-153		J3	62.2	35
1,3-Dichloropropane	0.144	ND	0.140	0.111	96.9	77.2	1	10.0-154			22.6	35
cis-1,3-Dichloropropene	0.144	ND	0.130	0.0921	90.3	63.9	1	10.0-151			34.2	37
trans-1,3-Dichloropropene	0.144	ND	0.142	0.113	98.5	78.3	1	10.0-148			22.9	37
2,2-Dichloropropane	0.144	ND	0.193	0.103	134	71.7	1	10.0-138		J3	60.7	36
Di-isopropyl ether	0.144	ND	0.181	0.131	125	91.3	1	10.0-147			31.6	36
Ethylbenzene	0.144	ND	0.140	0.0842	96.4	57.5	1	10.0-160		J3	50.0	38
Hexachloro-1,3-butadiene	0.144	ND	0.116	0.0781	80.5	54.2	1	10.0-160			39.0	40
Isopropylbenzene	0.144	ND	0.156	0.0940	108	65.3	1	10.0-155		J3	49.4	38
p-Isopropyltoluene	0.144	ND	0.144	0.0926	99.7	64.3	1	10.0-160		J3	43.1	40
2-Butanone (MEK)	0.720	ND	1.12	1.05	156	146	1	10.0-160			6.64	40
Methylene Chloride	0.144	ND	0.142	0.100	92.0	62.9	1	10.0-141			34.6	37
4-Methyl-2-pentanone (MIBK)	0.720	ND	0.744	0.723	103	100	1	10.0-160			2.90	35
Methyl tert-butyl ether	0.144	ND	0.140	0.122	97.0	84.4	1	11.0-147			14.0	35
Naphthalene	0.144	ND	0.213	0.195	144	132	1	10.0-160			8.42	36
n-Propylbenzene	0.144	ND	0.157	0.0986	109	68.4	1	10.0-158		J3	45.5	38
Styrene	0.144	ND	0.140	0.0989	96.9	68.6	1	10.0-160			34.2	40
1,1,1,2-Tetrachloroethane	0.144	ND	0.131	0.0895	91.1	62.1	1	10.0-149			37.8	39

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



L1034203-15 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1034203-15 10/16/18 09:30 • (MS) R3350952-3 10/16/18 13:36 • (MSD) R3350952-4 10/16/18 13:54

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
1,1,2,2-Tetrachloroethane	0.144	ND	0.157	0.141	109	98.0	1	10.0-160			10.7	35
Tetrachloroethene	0.144	ND	0.0823	0.0415	57.1	28.8	1	10.0-156		J3	66.0	39
Toluene	0.144	ND	0.169	0.115	115	77.0	1	10.0-156			38.0	38
1,1,2-Trichlorotrifluoroethane	0.144	ND	0.125	0.0591	86.8	41.0	1	10.0-160		J3	71.7	36
1,2,3-Trichlorobenzene	0.144	ND	0.127	0.107	88.2	74.3	1	10.0-160			17.1	40
1,2,4-Trichlorobenzene	0.144	ND	0.119	0.0874	82.8	60.7	1	10.0-160			30.8	40
1,1,1-Trichloroethane	0.144	ND	0.140	0.0765	97.1	53.1	1	10.0-144		J3	58.6	35
1,1,2-Trichloroethane	0.144	ND	0.159	0.130	110	90.4	1	10.0-160			19.9	35
Trichloroethene	0.144	ND	0.100	0.0585	69.5	40.6	1	10.0-156		J3	52.5	38
Trichlorofluoromethane	0.144	ND	0.0786	0.0433	54.5	30.1	1	10.0-160		J3	57.8	40
1,2,3-Trichloropropane	0.144	ND	0.131	0.114	91.1	79.1	1	10.0-156			14.1	35
1,2,3-Trimethylbenzene	0.144	ND	0.173	0.130	118	87.8	1	10.0-160			28.5	36
1,2,4-Trimethylbenzene	0.144	ND	0.192	0.144	131	97.3	1	10.0-160			28.6	36
1,3,5-Trimethylbenzene	0.144	ND	0.153	0.100	105	68.3	1	10.0-160		J3	41.7	38
Vinyl chloride	0.144	ND	0.0691	0.0372	47.9	25.8	1	10.0-160		J3	60.0	37
Xylenes, Total	0.432	ND	0.460	0.299	105	67.5	1	10.0-160		J3	42.6	38
(S) Toluene-d8					109	103		75.0-131				
(S) Dibromofluoromethane					114	111		65.0-129				
(S) 4-Bromofluorobenzene					111	111		67.0-138				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3351306-2 10/16/18 12:24

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0137	0.0250
Acrylonitrile	U		0.00190	0.0125
Benzene	U		0.000400	0.00100
Bromobenzene	U		0.00105	0.0125
Bromodichloromethane	U		0.000788	0.00250
Bromoform	U		0.00598	0.0250
Bromomethane	U		0.00370	0.0125
n-Butylbenzene	U		0.00384	0.0125
sec-Butylbenzene	U		0.00253	0.0125
tert-Butylbenzene	U		0.00155	0.00500
Carbon tetrachloride	U		0.00108	0.00500
Chlorobenzene	U		0.000573	0.00250
Chlorodibromomethane	U		0.000450	0.00250
Chloroethane	U		0.00108	0.00500
Chloroform	0.000576	U	0.000415	0.00250
Chloromethane	U		0.00139	0.0125
2-Chlorotoluene	U		0.000920	0.00250
4-Chlorotoluene	U		0.00113	0.00500
1,2-Dibromo-3-Chloropropane	U		0.00510	0.0250
1,2-Dibromoethane	U		0.000525	0.00250
Dibromomethane	U		0.00100	0.00500
1,2-Dichlorobenzene	U		0.00145	0.00500
1,3-Dichlorobenzene	U		0.00170	0.00500
1,4-Dichlorobenzene	U		0.00197	0.00500
Dichlorodifluoromethane	U		0.000818	0.00250
1,1-Dichloroethane	U		0.000575	0.00250
1,2-Dichloroethane	U		0.000475	0.00250
1,1-Dichloroethene	U		0.000500	0.00250
cis-1,2-Dichloroethene	U		0.000690	0.00250
trans-1,2-Dichloroethene	U		0.00143	0.00500
1,2-Dichloropropane	U		0.00127	0.00500
1,1-Dichloropropene	U		0.000700	0.00250
1,3-Dichloropropane	U		0.00175	0.00500
cis-1,3-Dichloropropene	U		0.000678	0.00250
trans-1,3-Dichloropropene	U		0.00153	0.00500
2,2-Dichloropropane	U		0.000793	0.00250
Di-isopropyl ether	U		0.000350	0.00100
Ethylbenzene	U		0.000530	0.00250
Hexachloro-1,3-butadiene	U		0.0127	0.0250
Isopropylbenzene	U		0.000863	0.00250

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3351306-2 10/16/18 12:24

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
p-Isopropyltoluene	U		0.00233	0.00500
2-Butanone (MEK)	U		0.0125	0.0250
Methylene Chloride	U		0.00664	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.0100	0.0250
Methyl tert-butyl ether	U		0.000295	0.00100
Naphthalene	U		0.00312	0.0125
n-Propylbenzene	U		0.00118	0.00500
Styrene	U		0.00273	0.0125
1,1,1,2-Tetrachloroethane	U		0.000500	0.00250
1,1,2,2-Tetrachloroethane	U		0.000390	0.00250
Tetrachloroethene	U		0.000700	0.00250
Toluene	U		0.00125	0.00500
1,1,2-Trichlorotrifluoroethane	U		0.000675	0.00250
1,2,3-Trichlorobenzene	U		0.000625	0.00250
1,2,4-Trichlorobenzene	U		0.00482	0.0125
1,1,1-Trichloroethane	U		0.000275	0.00250
1,1,2-Trichloroethane	U		0.000883	0.00250
Trichloroethene	U		0.000400	0.00100
Trichlorofluoromethane	U		0.000500	0.00250
1,2,3-Trichloropropane	U		0.00510	0.0125
1,2,3-Trimethylbenzene	U		0.00115	0.00500
1,2,4-Trimethylbenzene	U		0.00116	0.00500
1,3,5-Trimethylbenzene	U		0.00108	0.00500
Vinyl chloride	U		0.000683	0.00250
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	117			75.0-131
(S) Dibromofluoromethane	77.5			65.0-129
(S) 4-Bromofluorobenzene	91.3			67.0-138

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3351306-1 10/16/18 11:18

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.625	0.331	52.9	10.0-160	
Acrylonitrile	0.625	0.662	106	45.0-153	
Benzene	0.125	0.124	99.0	70.0-123	
Bromobenzene	0.125	0.145	116	73.0-121	
Bromodichloromethane	0.125	0.148	118	73.0-121	



Laboratory Control Sample (LCS)

(LCS) R3351306-1 10/16/18 11:18

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Bromoform	0.125	0.113	90.2	64.0-132	
Bromomethane	0.125	0.112	89.9	56.0-147	
n-Butylbenzene	0.125	0.141	113	68.0-135	
sec-Butylbenzene	0.125	0.142	113	74.0-130	
tert-Butylbenzene	0.125	0.137	110	75.0-127	
Carbon tetrachloride	0.125	0.143	115	66.0-128	
Chlorobenzene	0.125	0.130	104	76.0-128	
Chlorodibromomethane	0.125	0.0970	77.6	74.0-127	
Chloroethane	0.125	0.127	102	61.0-134	
Chloroform	0.125	0.0942	75.4	72.0-123	
Chloromethane	0.125	0.127	101	51.0-138	
2-Chlorotoluene	0.125	0.116	92.9	75.0-124	
4-Chlorotoluene	0.125	0.142	114	75.0-124	
1,2-Dibromo-3-Chloropropane	0.125	0.105	84.4	59.0-130	
1,2-Dibromoethane	0.125	0.119	95.3	74.0-128	
Dibromomethane	0.125	0.161	129	75.0-122	J4
1,2-Dichlorobenzene	0.125	0.139	111	76.0-124	
1,3-Dichlorobenzene	0.125	0.132	106	76.0-125	
1,4-Dichlorobenzene	0.125	0.123	98.5	77.0-121	
Dichlorodifluoromethane	0.125	0.135	108	43.0-156	
1,1-Dichloroethane	0.125	0.125	100	70.0-127	
1,2-Dichloroethane	0.125	0.106	84.8	65.0-131	
1,1-Dichloroethene	0.125	0.105	83.9	65.0-131	
cis-1,2-Dichloroethene	0.125	0.135	108	73.0-125	
trans-1,2-Dichloroethene	0.125	0.130	104	71.0-125	
1,2-Dichloropropane	0.125	0.0978	78.2	74.0-125	
1,1-Dichloropropene	0.125	0.110	88.3	73.0-125	
1,3-Dichloropropane	0.125	0.146	117	80.0-125	
cis-1,3-Dichloropropene	0.125	0.143	114	76.0-127	
trans-1,3-Dichloropropene	0.125	0.142	113	73.0-127	
2,2-Dichloropropane	0.125	0.115	92.2	59.0-135	
Di-isopropyl ether	0.125	0.118	94.7	60.0-136	
Ethylbenzene	0.125	0.101	81.1	74.0-126	
Hexachloro-1,3-butadiene	0.125	0.129	103	57.0-150	
Isopropylbenzene	0.125	0.113	90.7	72.0-127	
p-Isopropyltoluene	0.125	0.135	108	72.0-133	
2-Butanone (MEK)	0.625	0.549	87.8	30.0-160	
Methylene Chloride	0.125	0.130	104	68.0-123	
4-Methyl-2-pentanone (MIBK)	0.625	0.734	117	56.0-143	
Methyl tert-butyl ether	0.125	0.0939	75.2	66.0-132	

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Laboratory Control Sample (LCS)

(LCS) R3351306-1 10/16/18 11:18

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Naphthalene	0.125	0.118	94.5	59.0-130	
n-Propylbenzene	0.125	0.129	103	74.0-126	
Styrene	0.125	0.120	96.3	72.0-127	
1,1,1,2-Tetrachloroethane	0.125	0.113	90.3	74.0-129	
1,1,2,2-Tetrachloroethane	0.125	0.167	134	68.0-128	J4
Tetrachloroethene	0.125	0.165	132	70.0-136	
Toluene	0.125	0.115	91.8	75.0-121	
1,1,2-Trichlorotrifluoroethane	0.125	0.138	110	61.0-139	
1,2,3-Trichlorobenzene	0.125	0.104	83.6	59.0-139	
1,2,4-Trichlorobenzene	0.125	0.105	84.3	62.0-137	
1,1,1-Trichloroethane	0.125	0.125	99.9	69.0-126	
1,1,2-Trichloroethane	0.125	0.177	142	78.0-123	J4
Trichloroethene	0.125	0.110	87.8	76.0-126	
Trichlorofluoromethane	0.125	0.137	109	61.0-142	
1,2,3-Trichloropropane	0.125	0.106	84.8	67.0-129	
1,2,3-Trimethylbenzene	0.125	0.137	110	74.0-124	
1,2,4-Trimethylbenzene	0.125	0.101	80.6	70.0-126	
1,3,5-Trimethylbenzene	0.125	0.126	101	73.0-127	
Vinyl chloride	0.125	0.110	87.9	63.0-134	
Xylenes, Total	0.375	0.308	82.1	72.0-127	
(S) Toluene-d8			106	75.0-131	
(S) Dibromofluoromethane			93.3	65.0-129	
(S) 4-Bromofluorobenzene			101	67.0-138	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1033617-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1033617-01 10/16/18 13:03 • (MS) R3351306-3 10/16/18 20:20 • (MSD) R3351306-4 10/16/18 20:40

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	0.748	0.0452	0.168	0.182	16.5	18.3	1	10.0-160			8.03	40
Acrylonitrile	0.748	ND	0.350	0.408	46.8	54.5	1	10.0-160			15.3	40
Benzene	0.150	ND	0.113	0.0911	75.5	60.9	1	10.0-149			21.3	37
Bromobenzene	0.150	ND	0.148	0.111	99.2	74.2	1	10.0-156			28.9	38
Bromodichloromethane	0.150	ND	0.131	0.128	87.7	85.3	1	10.0-143			2.76	37
Bromoform	0.150	ND	0.107	0.0913	71.3	61.0	1	10.0-146			15.5	36
Bromomethane	0.150	ND	0.0276	0.0234	18.4	15.7	1	10.0-149			16.2	38
n-Butylbenzene	0.150	ND	0.136	0.0843	91.1	56.3	1	10.0-160		J3	47.2	40
sec-Butylbenzene	0.150	ND	0.137	0.0814	91.8	54.4	1	10.0-159		J3	51.1	39
tert-Butylbenzene	0.150	ND	0.132	0.0802	88.0	53.6	1	10.0-156		J3	48.5	39



L1033617-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1033617-01 10/16/18 13:03 • (MS) R3351306-3 10/16/18 20:20 • (MSD) R3351306-4 10/16/18 20:40

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Carbon tetrachloride	0.150	ND	0.110	0.0768	73.9	51.3	1	10.0-145			36.0	37
Chlorobenzene	0.150	ND	0.132	0.120	88.4	80.0	1	10.0-152			9.90	39
Chlorodibromomethane	0.150	ND	0.0920	0.0979	61.5	65.4	1	10.0-146			6.20	37
Chloroethane	0.150	ND	0.0194	0.0151	9.78	6.90	1	10.0-146	J6	J6	25.0	40
Chloroform	0.150	ND	0.0830	0.0726	55.0	48.1	1	10.0-146			13.4	37
Chloromethane	0.150	ND	0.0941	0.0752	60.7	48.1	1	10.0-159			22.4	37
2-Chlorotoluene	0.150	ND	0.114	0.0767	76.2	51.3	1	10.0-159		J3	39.1	38
4-Chlorotoluene	0.150	ND	0.142	0.0958	94.9	64.1	1	10.0-155			38.8	39
1,2-Dibromo-3-Chloropropane	0.150	ND	0.0986	0.0917	65.9	61.3	1	10.0-151			7.32	39
1,2-Dibromoethane	0.150	ND	0.121	0.133	81.0	89.0	1	10.0-148			9.41	34
Dibromomethane	0.150	ND	0.158	0.144	105	96.5	1	10.0-147			8.73	35
1,2-Dichlorobenzene	0.150	ND	0.143	0.112	95.4	75.1	1	10.0-155			23.8	37
1,3-Dichlorobenzene	0.150	ND	0.134	0.0964	89.5	64.4	1	10.0-153			32.6	38
1,4-Dichlorobenzene	0.150	ND	0.124	0.0926	83.1	61.9	1	10.0-151			29.2	38
Dichlorodifluoromethane	0.150	ND	0.0854	0.0517	57.1	34.6	1	10.0-160		J3	49.1	35
1,1-Dichloroethane	0.150	ND	0.109	0.0894	72.9	59.8	1	10.0-147			19.8	37
1,2-Dichloroethane	0.150	ND	0.0942	0.0960	61.8	63.0	1	10.0-148			1.88	35
1,1-Dichloroethene	0.150	ND	0.0825	0.0573	55.2	38.3	1	10.0-155			36.1	37
cis-1,2-Dichloroethene	0.150	ND	0.118	0.103	79.2	69.0	1	10.0-149			13.8	37
trans-1,2-Dichloroethene	0.150	ND	0.108	0.0829	72.0	55.4	1	10.0-150			26.1	37
1,2-Dichloropropane	0.150	ND	0.0917	0.0836	61.3	55.9	1	10.0-148			9.18	37
1,1-Dichloropropene	0.150	ND	0.0928	0.0657	62.0	43.9	1	10.0-153			34.1	35
1,3-Dichloropropane	0.150	ND	0.159	0.169	105	111	1	10.0-154			5.92	35
cis-1,3-Dichloropropene	0.150	ND	0.132	0.130	88.2	86.9	1	10.0-151			1.54	37
trans-1,3-Dichloropropene	0.150	ND	0.133	0.139	89.1	93.1	1	10.0-148			4.40	37
2,2-Dichloropropane	0.150	ND	0.0691	0.0544	46.2	36.3	1	10.0-138			23.8	36
Di-isopropyl ether	0.150	ND	0.105	0.102	70.1	67.9	1	10.0-147			3.20	36
Ethylbenzene	0.150	ND	0.0998	0.0815	66.7	54.5	1	10.0-160			20.2	38
Hexachloro-1,3-butadiene	0.150	ND	0.126	0.0814	84.0	54.4	1	10.0-160		J3	42.8	40
Isopropylbenzene	0.150	ND	0.109	0.0659	72.8	44.1	1	10.0-155		J3	49.1	38
p-Isopropyltoluene	0.150	ND	0.128	0.0797	85.8	53.3	1	10.0-160		J3	46.8	40
2-Butanone (MEK)	0.748	ND	0.322	0.331	43.0	44.3	1	10.0-160			2.88	40
Methylene Chloride	0.150	ND	0.110	0.103	73.8	68.6	1	10.0-141			7.31	37
4-Methyl-2-pentanone (MIBK)	0.748	ND	0.730	0.921	97.6	123	1	10.0-160			23.1	35
Methyl tert-butyl ether	0.150	ND	0.0618	0.0678	41.3	45.3	1	11.0-147			9.24	35
Naphthalene	0.150	ND	0.130	0.117	87.1	78.3	1	10.0-160			10.6	36
n-Propylbenzene	0.150	ND	0.127	0.0766	85.0	51.2	1	10.0-158		J3	49.6	38
Styrene	0.150	ND	0.124	0.0882	82.8	59.0	1	10.0-160			33.6	40
1,1,1,2-Tetrachloroethane	0.150	ND	0.105	0.101	69.9	67.4	1	10.0-149			3.79	39

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



L1033617-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1033617-01 10/16/18 13:03 • (MS) R3351306-3 10/16/18 20:20 • (MSD) R3351306-4 10/16/18 20:40

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
1,1,2,2-Tetrachloroethane	0.150	ND	0.173	0.154	116	103	1	10.0-160			11.9	35
Tetrachloroethene	0.150	ND	0.164	0.117	110	78.0	1	10.0-156			33.8	39
Toluene	0.150	ND	0.113	0.0938	75.3	62.7	1	10.0-156			18.3	38
1,1,2-Trichlorotrifluoroethane	0.150	ND	0.103	0.0635	69.0	42.5	1	10.0-160		J3	47.6	36
1,2,3-Trichlorobenzene	0.150	ND	0.113	0.0942	75.8	63.0	1	10.0-160			18.5	40
1,2,4-Trichlorobenzene	0.150	ND	0.109	0.0879	73.2	58.8	1	10.0-160			21.8	40
1,1,1-Trichloroethane	0.150	ND	0.0962	0.0715	64.3	47.8	1	10.0-144			29.5	35
1,1,2-Trichloroethane	0.150	0.0746	0.187	0.202	75.4	85.3	1	10.0-160			7.56	35
Trichloroethene	0.150	ND	0.0981	0.0788	65.6	52.7	1	10.0-156			21.9	38
Trichlorofluoromethane	0.150	ND	0.0986	0.0624	65.9	41.7	1	10.0-160		J3	45.0	40
1,2,3-Trichloropropane	0.150	ND	0.114	0.101	75.9	67.3	1	10.0-156			12.0	35
1,2,3-Trimethylbenzene	0.150	ND	0.138	0.0988	92.1	66.0	1	10.0-160			33.0	36
1,2,4-Trimethylbenzene	0.150	ND	0.0978	0.0661	65.4	44.2	1	10.0-160		J3	38.7	36
1,3,5-Trimethylbenzene	0.150	ND	0.121	0.0779	81.0	52.1	1	10.0-160		J3	43.4	38
Vinyl chloride	0.150	ND	0.00568	0.00461	3.80	3.08	1	10.0-160	J6	J6	20.8	37
Xylenes, Total	0.449	ND	0.298	0.251	66.5	55.8	1	10.0-160			17.4	38
(S) Toluene-d8					113	114		75.0-131				
(S) Dibromofluoromethane					81.4	80.1		65.0-129				
(S) 4-Bromofluorobenzene					104	88.1		67.0-138				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3351339-2 10/16/18 22:58

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0137	0.0250
Acrylonitrile	U		0.00190	0.0125
Benzene	U		0.000400	0.00100
Bromobenzene	U		0.00105	0.0125
Bromodichloromethane	U		0.000788	0.00250
Bromoform	U		0.00598	0.0250
Bromomethane	U		0.00370	0.0125
n-Butylbenzene	U		0.00384	0.0125
sec-Butylbenzene	U		0.00253	0.0125
tert-Butylbenzene	U		0.00155	0.00500
Carbon tetrachloride	U		0.00108	0.00500
Chlorobenzene	U		0.000573	0.00250
Chlorodibromomethane	U		0.000450	0.00250
Chloroethane	U		0.00108	0.00500
Chloroform	U		0.000415	0.00250
Chloromethane	U		0.00139	0.0125
2-Chlorotoluene	U		0.000920	0.00250
4-Chlorotoluene	U		0.00113	0.00500
1,2-Dibromo-3-Chloropropane	U		0.00510	0.0250
1,2-Dibromoethane	U		0.000525	0.00250
Dibromomethane	U		0.00100	0.00500
1,2-Dichlorobenzene	U		0.00145	0.00500
1,3-Dichlorobenzene	U		0.00170	0.00500
1,4-Dichlorobenzene	U		0.00197	0.00500
Dichlorodifluoromethane	U		0.000818	0.00250
1,1-Dichloroethane	U		0.000575	0.00250
1,2-Dichloroethane	U		0.000475	0.00250
1,1-Dichloroethene	U		0.000500	0.00250
cis-1,2-Dichloroethene	U		0.000690	0.00250
trans-1,2-Dichloroethene	U		0.00143	0.00500
1,2-Dichloropropane	U		0.00127	0.00500
1,1-Dichloropropene	U		0.000700	0.00250
1,3-Dichloropropane	U		0.00175	0.00500
cis-1,3-Dichloropropene	U		0.000678	0.00250
trans-1,3-Dichloropropene	U		0.00153	0.00500
2,2-Dichloropropane	U		0.000793	0.00250
Di-isopropyl ether	U		0.000350	0.00100
Ethylbenzene	U		0.000530	0.00250
Hexachloro-1,3-butadiene	U		0.0127	0.0250
Isopropylbenzene	U		0.000863	0.00250

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3351339-2 10/16/18 22:58

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
p-Isopropyltoluene	U		0.00233	0.00500
2-Butanone (MEK)	U		0.0125	0.0250
Methylene Chloride	U		0.00664	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.0100	0.0250
Methyl tert-butyl ether	U		0.000295	0.00100
Naphthalene	U		0.00312	0.0125
n-Propylbenzene	U		0.00118	0.00500
Styrene	U		0.00273	0.0125
1,1,1,2-Tetrachloroethane	U		0.000500	0.00250
1,1,2,2-Tetrachloroethane	U		0.000390	0.00250
Tetrachloroethene	U		0.000700	0.00250
Toluene	U		0.00125	0.00500
1,1,2-Trichlorotrifluoroethane	U		0.000675	0.00250
1,2,3-Trichlorobenzene	U		0.000625	0.00250
1,2,4-Trichlorobenzene	U		0.00482	0.0125
1,1,1-Trichloroethane	U		0.000275	0.00250
1,1,2-Trichloroethane	U		0.000883	0.00250
Trichloroethene	U		0.000400	0.00100
Trichlorofluoromethane	U		0.000500	0.00250
1,2,3-Trichloropropane	U		0.00510	0.0125
1,2,3-Trimethylbenzene	U		0.00115	0.00500
1,2,4-Trimethylbenzene	U		0.00116	0.00500
1,3,5-Trimethylbenzene	U		0.00108	0.00500
Vinyl chloride	U		0.000683	0.00250
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	109			75.0-131
(S) Dibromofluoromethane	92.7			65.0-129
(S) 4-Bromofluorobenzene	86.8			67.0-138

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS)

(LCS) R3351339-1 10/16/18 21:59

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.625	0.222	35.6	10.0-160	
Acrylonitrile	0.625	0.516	82.6	45.0-153	
Benzene	0.125	0.127	101	70.0-123	
Bromobenzene	0.125	0.121	96.7	73.0-121	
Bromodichloromethane	0.125	0.143	115	73.0-121	



Laboratory Control Sample (LCS)

(LCS) R3351339-1 10/16/18 21:59

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Bromoform	0.125	0.0896	71.7	64.0-132	
Bromomethane	0.125	0.114	91.2	56.0-147	
n-Butylbenzene	0.125	0.112	89.8	68.0-135	
sec-Butylbenzene	0.125	0.119	95.2	74.0-130	
tert-Butylbenzene	0.125	0.116	92.7	75.0-127	
Carbon tetrachloride	0.125	0.146	117	66.0-128	
Chlorobenzene	0.125	0.131	105	76.0-128	
Chlorodibromomethane	0.125	0.0937	74.9	74.0-127	
Chloroethane	0.125	0.135	108	61.0-134	
Chloroform	0.125	0.0940	75.2	72.0-123	
Chloromethane	0.125	0.141	113	51.0-138	
2-Chlorotoluene	0.125	0.0979	78.3	75.0-124	
4-Chlorotoluene	0.125	0.119	95.0	75.0-124	
1,2-Dibromo-3-Chloropropane	0.125	0.0759	60.7	59.0-130	
1,2-Dibromoethane	0.125	0.114	91.3	74.0-128	
Dibromomethane	0.125	0.152	122	75.0-122	
1,2-Dichlorobenzene	0.125	0.113	90.7	76.0-124	
1,3-Dichlorobenzene	0.125	0.110	88.2	76.0-125	
1,4-Dichlorobenzene	0.125	0.101	80.7	77.0-121	
Dichlorodifluoromethane	0.125	0.157	126	43.0-156	
1,1-Dichloroethane	0.125	0.127	102	70.0-127	
1,2-Dichloroethane	0.125	0.102	81.4	65.0-131	
1,1-Dichloroethene	0.125	0.109	87.3	65.0-131	
cis-1,2-Dichloroethene	0.125	0.135	108	73.0-125	
trans-1,2-Dichloroethene	0.125	0.131	105	71.0-125	
1,2-Dichloropropane	0.125	0.0985	78.8	74.0-125	
1,1-Dichloropropene	0.125	0.113	90.5	73.0-125	
1,3-Dichloropropane	0.125	0.146	117	80.0-125	
cis-1,3-Dichloropropene	0.125	0.137	110	76.0-127	
trans-1,3-Dichloropropene	0.125	0.134	107	73.0-127	
2,2-Dichloropropane	0.125	0.105	83.8	59.0-135	
Di-isopropyl ether	0.125	0.113	90.5	60.0-136	
Ethylbenzene	0.125	0.101	81.1	74.0-126	
Hexachloro-1,3-butadiene	0.125	0.103	82.4	57.0-150	
Isopropylbenzene	0.125	0.0956	76.4	72.0-127	
p-Isopropyltoluene	0.125	0.112	89.5	72.0-133	
2-Butanone (MEK)	0.625	0.482	77.1	30.0-160	
Methylene Chloride	0.125	0.128	102	68.0-123	
4-Methyl-2-pentanone (MIBK)	0.625	0.650	104	56.0-143	
Methyl tert-butyl ether	0.125	0.0842	67.4	66.0-132	

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Laboratory Control Sample (LCS)

(LCS) R3351339-1 10/16/18 21:59

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Naphthalene	0.125	0.0853	68.3	59.0-130	
n-Propylbenzene	0.125	0.108	86.5	74.0-126	
Styrene	0.125	0.0990	79.2	72.0-127	
1,1,1,2-Tetrachloroethane	0.125	0.110	87.7	74.0-129	
1,1,2,2-Tetrachloroethane	0.125	0.127	101	68.0-128	
Tetrachloroethene	0.125	0.173	139	70.0-136	J4
Toluene	0.125	0.118	94.7	75.0-121	
1,1,2-Trichlorotrifluoroethane	0.125	0.145	116	61.0-139	
1,2,3-Trichlorobenzene	0.125	0.0809	64.7	59.0-139	
1,2,4-Trichlorobenzene	0.125	0.0799	64.0	62.0-137	
1,1,1-Trichloroethane	0.125	0.126	101	69.0-126	
1,1,2-Trichloroethane	0.125	0.174	139	78.0-123	J4
Trichloroethene	0.125	0.116	92.5	76.0-126	
Trichlorofluoromethane	0.125	0.146	117	61.0-142	
1,2,3-Trichloropropane	0.125	0.0851	68.1	67.0-129	
1,2,3-Trimethylbenzene	0.125	0.111	88.8	74.0-124	
1,2,4-Trimethylbenzene	0.125	0.0812	65.0	70.0-126	J4
1,3,5-Trimethylbenzene	0.125	0.104	82.9	73.0-127	
Vinyl chloride	0.125	0.121	96.6	63.0-134	
Xylenes, Total	0.375	0.302	80.5	72.0-127	
(S) Toluene-d8			108	75.0-131	
(S) Dibromofluoromethane			91.0	65.0-129	
(S) 4-Bromofluorobenzene			91.6	67.0-138	

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

L1034293-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1034293-02 10/17/18 07:31 • (MS) R3351339-3 10/16/18 23:37 • (MSD) R3351339-4 10/16/18 23:57

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	0.711	0.103	0.205	0.769	9.27	60.5	1.55	10.0-160	J6	J3	116	40
Acrylonitrile	0.711	ND	0.616	1.19	55.9	108	1.55	10.0-160		J3	63.9	40
Benzene	0.142	ND	0.228	0.234	103	106	1.55	10.0-149			2.46	37
Bromobenzene	0.142	ND	0.215	0.257	97.8	116	1.55	10.0-156			17.4	38
Bromodichloromethane	0.142	ND	0.267	0.272	121	123	1.55	10.0-143			1.85	37
Bromoform	0.142	ND	0.144	0.172	65.4	78.3	1.55	10.0-146			17.9	36
Bromomethane	0.142	ND	0.0535	0.0301	24.3	13.7	1.55	10.0-149		J3	55.9	38
n-Butylbenzene	0.142	ND	0.251	0.304	114	138	1.55	10.0-160			19.1	40
sec-Butylbenzene	0.142	ND	0.243	0.285	110	129	1.55	10.0-159			16.1	39
tert-Butylbenzene	0.142	ND	0.223	0.269	101	122	1.55	10.0-156			18.7	39



L1034293-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1034293-02 10/17/18 07:31 • (MS) R3351339-3 10/16/18 23:37 • (MSD) R3351339-4 10/16/18 23:57

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Carbon tetrachloride	0.142	ND	0.261	0.255	119	116	1.55	10.0-145			2.25	37
Chlorobenzene	0.142	ND	0.255	0.260	116	118	1.55	10.0-152			1.99	39
Chlorodibromomethane	0.142	ND	0.171	0.173	77.6	78.7	1.55	10.0-146			1.32	37
Chloroethane	0.142	ND	0.0452	0.0436	20.5	19.8	1.55	10.0-146			3.48	40
Chloroform	0.142	ND	0.169	0.173	76.6	78.5	1.55	10.0-146			2.56	37
Chloromethane	0.142	ND	0.251	0.252	114	114	1.55	10.0-159			0.503	37
2-Chlorotoluene	0.142	ND	0.179	0.216	81.3	97.9	1.55	10.0-159			18.6	38
4-Chlorotoluene	0.142	ND	0.219	0.262	99.2	119	1.55	10.0-155			18.1	39
1,2-Dibromo-3-Chloropropane	0.142	ND	0.128	0.172	58.1	77.9	1.55	10.0-151			29.0	39
1,2-Dibromoethane	0.142	ND	0.209	0.211	95.0	95.9	1.55	10.0-148			0.929	34
Dibromomethane	0.142	ND	0.271	0.285	123	129	1.55	10.0-147			4.97	35
1,2-Dichlorobenzene	0.142	ND	0.207	0.246	93.8	112	1.55	10.0-155			17.5	37
1,3-Dichlorobenzene	0.142	ND	0.201	0.238	91.3	108	1.55	10.0-153			16.8	38
1,4-Dichlorobenzene	0.142	ND	0.186	0.220	84.6	99.9	1.55	10.0-151			16.6	38
Dichlorodifluoromethane	0.142	ND	0.337	0.325	153	148	1.55	10.0-160			3.51	35
1,1-Dichloroethane	0.142	ND	0.231	0.233	105	106	1.55	10.0-147			0.860	37
1,2-Dichloroethane	0.142	ND	0.174	0.191	78.8	86.9	1.55	10.0-148			9.70	35
1,1-Dichloroethene	0.142	ND	0.194	0.191	88.2	86.6	1.55	10.0-155			1.82	37
cis-1,2-Dichloroethene	0.142	ND	0.238	0.245	108	111	1.55	10.0-149			2.92	37
trans-1,2-Dichloroethene	0.142	ND	0.228	0.228	104	103	1.55	10.0-150			0.273	37
1,2-Dichloropropane	0.142	ND	0.184	0.188	83.3	85.3	1.55	10.0-148			2.35	37
1,1-Dichloropropene	0.142	ND	0.201	0.202	91.3	91.8	1.55	10.0-153			0.516	35
1,3-Dichloropropane	0.142	ND	0.276	0.280	125	127	1.55	10.0-154			1.38	35
cis-1,3-Dichloropropene	0.142	ND	0.252	0.247	114	112	1.55	10.0-151			2.04	37
trans-1,3-Dichloropropene	0.142	ND	0.243	0.242	110	110	1.55	10.0-148			0.619	37
2,2-Dichloropropane	0.142	ND	0.175	0.157	79.5	71.1	1.55	10.0-138			11.2	36
Di-isopropyl ether	0.142	ND	0.205	0.224	93.2	102	1.55	10.0-147			8.76	36
Ethylbenzene	0.142	ND	0.210	0.223	95.5	101	1.55	10.0-160			5.57	38
Hexachloro-1,3-butadiene	0.142	ND	0.241	0.277	109	126	1.55	10.0-160			14.0	40
Isopropylbenzene	0.142	ND	0.183	0.223	82.9	101	1.55	10.0-155			19.9	38
p-Isopropyltoluene	0.142	ND	0.229	0.275	104	125	1.55	10.0-160			18.5	40
2-Butanone (MEK)	0.711	ND	0.872	0.946	79.2	85.8	1.55	10.0-160			8.11	40
Methylene Chloride	0.142	ND	0.215	0.218	97.7	98.8	1.55	10.0-141			1.12	37
4-Methyl-2-pentanone (MIBK)	0.711	ND	1.13	1.06	103	96.4	1.55	10.0-160			6.33	35
Methyl tert-butyl ether	0.142	ND	0.120	0.151	54.3	68.7	1.55	11.0-147			23.3	35
Naphthalene	0.142	ND	0.200	0.242	87.8	107	1.55	10.0-160			19.3	36
n-Propylbenzene	0.142	ND	0.216	0.266	96.7	119	1.55	10.0-158			20.8	38
Styrene	0.142	ND	0.198	0.245	90.0	111	1.55	10.0-160			21.0	40
1,1,1,2-Tetrachloroethane	0.142	ND	0.204	0.211	92.4	95.8	1.55	10.0-149			3.55	39

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



L1034293-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1034293-02 10/17/18 07:31 • (MS) R3351339-3 10/16/18 23:37 • (MSD) R3351339-4 10/16/18 23:57

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
1,1,2,2-Tetrachloroethane	0.142	ND	0.231	0.277	105	126	1.55	10.0-160			18.1	35
Tetrachloroethene	0.142	ND	0.327	0.331	149	150	1.55	10.0-156			1.25	39
Toluene	0.142	ND	0.239	0.242	104	106	1.55	10.0-156			1.18	38
1,1,2-Trichlorotrifluoroethane	0.142	0.130	0.383	0.356	114	103	1.55	10.0-160			7.13	36
1,2,3-Trichlorobenzene	0.142	ND	0.173	0.208	78.5	94.5	1.55	10.0-160			18.5	40
1,2,4-Trichlorobenzene	0.142	ND	0.177	0.206	80.2	93.3	1.55	10.0-160			15.1	40
1,1,1-Trichloroethane	0.142	ND	0.226	0.216	103	98.1	1.55	10.0-144			4.35	35
1,1,2-Trichloroethane	0.142	ND	0.328	0.339	149	154	1.55	10.0-160			3.24	35
Trichloroethene	0.142	ND	0.198	0.200	89.7	90.7	1.55	10.0-156			1.05	38
Trichlorofluoromethane	0.142	0.00549	0.266	0.254	118	113	1.55	10.0-160			4.61	40
1,2,3-Trichloropropane	0.142	ND	0.142	0.177	64.6	80.5	1.55	10.0-156			22.0	35
1,2,3-Trimethylbenzene	0.142	ND	0.203	0.244	90.2	109	1.55	10.0-160			18.5	36
1,2,4-Trimethylbenzene	0.142	ND	0.168	0.205	74.4	91.1	1.55	10.0-160			19.7	36
1,3,5-Trimethylbenzene	0.142	ND	0.202	0.245	91.9	111	1.55	10.0-160			19.1	38
Vinyl chloride	0.142	ND	0.0171	0.0134	7.74	6.06	1.55	10.0-160	<u>J6</u>	<u>J6</u>	24.3	37
Xylenes, Total	0.426	ND	0.638	0.661	94.9	98.4	1.55	10.0-160			3.50	38
(S) Toluene-d8					112	112		75.0-131				
(S) Dibromofluoromethane					83.7	86.5		65.0-129				
(S) 4-Bromofluorobenzene					88.2	94.6		67.0-138				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3351317-2 10/16/18 21:18

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
Benzene	U		0.000400	0.00100
Ethylbenzene	U		0.000530	0.00250
Toluene	U		0.00125	0.00500
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	119			75.0-131
(S) Dibromofluoromethane	91.6			65.0-129
(S) a,a,a-Trifluorotoluene	99.2			80.0-120
(S) 4-Bromofluorobenzene	102			67.0-138

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3351317-1 10/16/18 20:07

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/kg	mg/kg	%	%	
Benzene	0.125	0.130	104	70.0-123	
Ethylbenzene	0.125	0.140	112	74.0-126	
Toluene	0.125	0.139	111	75.0-121	
Xylenes, Total	0.375	0.372	99.2	72.0-127	
(S) Toluene-d8			109	75.0-131	
(S) Dibromofluoromethane			108	65.0-129	
(S) a,a,a-Trifluorotoluene			101	80.0-120	
(S) 4-Bromofluorobenzene			103	67.0-138	

L1034562-15 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1034562-15 10/17/18 04:46 • (MS) R3351317-3 10/17/18 05:06 • (MSD) R3351317-4 10/17/18 05:27

Analyte	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Benzene	0.151	0.0274	0.981	0.932	78.8	74.7	8	10.0-149			5.13	37
Ethylbenzene	0.151	8.42	6.22	3.92	0.000	0.000	8	10.0-160	V	J3 V	45.4	38
Toluene	0.151	1.17	3.26	3.03	173	154	8	10.0-156	J5		7.44	38
Xylenes, Total	0.454	153	58.9	55.3	0.000	0.000	8	10.0-160	E V	E V	6.15	38
(S) Toluene-d8					111	101		75.0-131				
(S) Dibromofluoromethane					106	106		65.0-129				
(S) a,a,a-Trifluorotoluene					101	101		80.0-120				
(S) 4-Bromofluorobenzene					112	106		67.0-138				



Method Blank (MB)

(MB) R3351207-1 10/16/18 13:51

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
TPH (GC/FID) High Fraction	U		0.0247	0.100
(S) o-Terphenyl	88.5			31.0-160

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3351207-2 10/16/18 14:09 • (LCSD) R3351207-3 10/16/18 14:26

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
TPH (GC/FID) High Fraction	1.50	1.54	1.58	103	105	50.0-150			2.56	20
(S) o-Terphenyl				90.5	92.5	31.0-160				

L1034230-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1034230-01 10/16/18 19:59 • (MS) R3351207-4 10/16/18 20:16 • (MSD) R3351207-5 10/16/18 20:34

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
TPH (GC/FID) High Fraction	1.46	3.08	5.32	5.01	153	129	10	50.0-150	J5		6.00	20
(S) o-Terphenyl					124	122		31.0-160				



Method Blank (MB)

(MB) R3351181-1 10/16/18 14:10

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) High Fraction	U		0.769	4.00
<i>(S) o-Terphenyl</i>	72.1			18.0-148

1 Cp

2 Tc

3 Ss

4 Cn

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3351181-2 10/16/18 14:22 • (LCSD) R3351181-3 10/16/18 14:34

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) High Fraction	50.0	34.4	35.5	68.8	71.0	50.0-150			3.15	20
<i>(S) o-Terphenyl</i>				84.2	86.2	18.0-148				

5 Sr

6 Qc

L1033797-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1033797-04 10/16/18 14:46 • (MS) R3351181-4 10/16/18 14:58 • (MSD) R3351181-5 10/16/18 15:10

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) High Fraction	50.0	ND	32.8	33.6	65.6	67.2	1	50.0-150			2.41	20
<i>(S) o-Terphenyl</i>					80.5	77.9		18.0-148				

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3351160-3 10/16/18 02:31

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acenaphthene	U		0.00642	0.0333
Acenaphthylene	U		0.00671	0.0333
Anthracene	U		0.00632	0.0333
Benzidine	U		0.0637	0.333
Benzo(a)anthracene	U		0.00428	0.0333
Benzo(b)fluoranthene	U		0.00695	0.0333
Benzo(k)fluoranthene	U		0.00582	0.0333
Benzo(g,h,i)perylene	U		0.00721	0.0333
Benzo(a)pyrene	U		0.00548	0.0333
Bis(2-chlorethoxy)methane	U		0.00770	0.333
Bis(2-chloroethyl)ether	U		0.00896	0.333
Bis(2-chloroisopropyl)ether	U		0.00760	0.333
4-Bromophenyl-phenylether	U		0.0114	0.333
2-Chloronaphthalene	U		0.00639	0.0333
4-Chlorophenyl-phenylether	U		0.00627	0.333
Chrysene	U		0.00555	0.0333
Dibenz(a,h)anthracene	U		0.00821	0.0333
3,3-Dichlorobenzidine	U		0.0794	0.333
2,4-Dinitrotoluene	U		0.00607	0.333
2,6-Dinitrotoluene	U		0.00737	0.333
Fluoranthene	U		0.00496	0.0333
Fluorene	U		0.00682	0.0333
Hexachlorobenzene	U		0.00856	0.333
Hexachloro-1,3-butadiene	U		0.0100	0.333
Hexachlorocyclopentadiene	U		0.0587	0.333
Hexachloroethane	U		0.0134	0.333
Indeno(1,2,3-cd)pyrene	U		0.00772	0.0333
Isophorone	U		0.00522	0.333
Naphthalene	U		0.00889	0.0333
Nitrobenzene	U		0.00695	0.333
n-Nitrosodimethylamine	U		0.0647	0.333
n-Nitrosodiphenylamine	U		0.0900	0.333
n-Nitrosodi-n-propylamine	U		0.00906	0.333
Phenanthrene	U		0.00528	0.0333
Benzylbutyl phthalate	U		0.0103	0.333
Bis(2-ethylhexyl)phthalate	U		0.0120	0.333
Di-n-butyl phthalate	U		0.0109	0.333
Diethyl phthalate	U		0.00691	0.333
Dimethyl phthalate	U		0.00540	0.333
Di-n-octyl phthalate	U		0.00907	0.333

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3351160-3 10/16/18 02:31

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Pyrene	U		0.0123	0.0333
1,2,4-Trichlorobenzene	U		0.00876	0.333
4-Chloro-3-methylphenol	U		0.00477	0.333
2-Chlorophenol	U		0.00831	0.333
2,4-Dichlorophenol	U		0.00746	0.333
2,4-Dimethylphenol	U		0.0471	0.333
4,6-Dinitro-2-methylphenol	U		0.124	0.333
2,4-Dinitrophenol	U		0.0980	0.333
2-Nitrophenol	U		0.0130	0.333
4-Nitrophenol	U		0.0525	0.333
Pentachlorophenol	U		0.0480	0.333
Phenol	U		0.00695	0.333
2,4,6-Trichlorophenol	U		0.00779	0.333
(S) Nitrobenzene-d5	66.7			10.0-122
(S) 2-Fluorobiphenyl	64.0			15.0-120
(S) p-Terphenyl-d14	67.9			10.0-120
(S) Phenol-d5	63.7			10.0-120
(S) 2-Fluorophenol	74.6			12.0-120
(S) 2,4,6-Tribromophenol	68.3			10.0-127

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3351160-1 10/16/18 01:44 • (LCSD) R3351160-2 10/16/18 02:07

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.666	0.417	0.439	62.6	65.9	38.0-120			5.14	22
Acenaphthylene	0.666	0.402	0.422	60.4	63.4	40.0-120			4.85	22
Anthracene	0.666	0.427	0.442	64.1	66.4	42.0-120			3.45	20
Benzidine	0.666	ND	0.0637	0.000	0.000	1.00-120	J4	J4	0.000	40
Benzo(a)anthracene	0.666	0.461	0.459	69.2	68.9	44.0-120			0.435	20
Benzo(b)fluoranthene	0.666	0.472	0.442	70.9	66.4	43.0-120			6.56	22
Benzo(k)fluoranthene	0.666	0.470	0.501	70.6	75.2	44.0-120			6.39	21
Benzo(g,h,i)perylene	0.666	0.511	0.515	76.7	77.3	43.0-120			0.780	22
Benzo(a)pyrene	0.666	0.466	0.465	70.0	69.8	45.0-120			0.215	20
Bis(2-chlorethoxy)methane	0.666	0.307	0.334	46.1	50.2	20.0-120			8.42	23
Bis(2-chloroethyl)ether	0.666	0.311	0.330	46.7	49.5	16.0-120			5.93	31
Bis(2-chloroisopropyl)ether	0.666	0.299	0.323	44.9	48.5	23.0-120			7.72	30
4-Bromophenyl-phenylether	0.666	0.441	0.445	66.2	66.8	40.0-120			0.903	21
2-Chloronaphthalene	0.666	0.369	0.388	55.4	58.3	35.0-120			5.02	24



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3351160-1 10/16/18 01:44 • (LCSD) R3351160-2 10/16/18 02:07

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
4-Chlorophenyl-phenylether	0.666	0.419	0.440	62.9	66.1	40.0-120			4.89	22
Chrysene	0.666	0.464	0.469	69.7	70.4	43.0-120			1.07	20
Dibenz(a,h)anthracene	0.666	0.463	0.464	69.5	69.7	44.0-120			0.216	22
3,3-Dichlorobenzidine	0.666	0.420	0.429	63.1	64.4	28.0-120			2.12	23
2,4-Dinitrotoluene	0.666	0.490	0.500	73.6	75.1	45.0-120			2.02	21
2,6-Dinitrotoluene	0.666	0.446	0.466	67.0	70.0	42.0-120			4.39	21
Fluoranthene	0.666	0.492	0.479	73.9	71.9	44.0-120			2.68	21
Fluorene	0.666	0.444	0.460	66.7	69.1	41.0-120			3.54	22
Hexachlorobenzene	0.666	0.458	0.462	68.8	69.4	39.0-120			0.870	21
Hexachloro-1,3-butadiene	0.666	0.366	0.384	55.0	57.7	15.0-120			4.80	28
Hexachlorocyclopentadiene	0.666	0.352	0.379	52.9	56.9	15.0-120			7.39	31
Hexachloroethane	0.666	0.313	0.341	47.0	51.2	17.0-120			8.56	31
Indeno(1,2,3-cd)pyrene	0.666	0.491	0.496	73.7	74.5	45.0-120			1.01	21
Isophorone	0.666	0.346	0.360	52.0	54.1	23.0-120			3.97	23
Naphthalene	0.666	0.333	0.354	50.0	53.2	18.0-120			6.11	24
Nitrobenzene	0.666	0.358	0.380	53.8	57.1	17.0-120			5.96	26
n-Nitrosodimethylamine	0.666	0.249	0.263	37.4	39.5	10.0-125			5.47	33
n-Nitrosodiphenylamine	0.666	0.434	0.448	65.2	67.3	40.0-120			3.17	21
n-Nitrosodi-n-propylamine	0.666	0.328	0.350	49.2	52.6	26.0-120			6.49	27
Phenanthrene	0.666	0.450	0.447	67.6	67.1	42.0-120			0.669	20
Benzylbutyl phthalate	0.666	0.467	0.477	70.1	71.6	40.0-120			2.12	21
Bis(2-ethylhexyl)phthalate	0.666	0.472	0.484	70.9	72.7	41.0-120			2.51	21
Di-n-butyl phthalate	0.666	0.495	0.497	74.3	74.6	43.0-120			0.403	20
Diethyl phthalate	0.666	0.473	0.487	71.0	73.1	43.0-120			2.92	21
Dimethyl phthalate	0.666	0.449	0.454	67.4	68.2	43.0-120			1.11	22
Di-n-octyl phthalate	0.666	0.475	0.473	71.3	71.0	40.0-120			0.422	21
Pyrene	0.666	0.473	0.485	71.0	72.8	41.0-120			2.51	21
1,2,4-Trichlorobenzene	0.666	0.330	0.350	49.5	52.6	17.0-120			5.88	26
4-Chloro-3-methylphenol	0.666	0.420	0.428	63.1	64.3	28.0-120			1.89	20
2-Chlorophenol	0.666	0.338	0.376	50.8	56.5	28.0-120			10.6	28
2,4-Dichlorophenol	0.666	0.378	0.395	56.8	59.3	25.0-120			4.40	21
2,4-Dimethylphenol	0.666	0.403	0.421	60.5	63.2	15.0-120			4.37	26
4,6-Dinitro-2-methylphenol	0.666	0.462	0.441	69.4	66.2	16.0-120			4.65	33
2,4-Dinitrophenol	0.666	0.370	0.356	55.6	53.5	10.0-120			3.86	40
2-Nitrophenol	0.666	0.361	0.381	54.2	57.2	20.0-120			5.39	25
4-Nitrophenol	0.666	0.353	0.370	53.0	55.6	27.0-120			4.70	24
Pentachlorophenol	0.666	0.442	0.461	66.4	69.2	29.0-120			4.21	25
Phenol	0.666	0.356	0.382	53.5	57.4	28.0-120			7.05	27
2,4,6-Trichlorophenol	0.666	0.397	0.415	59.6	62.3	37.0-120			4.43	24
(S) Nitrobenzene-d5				54.4	57.1	10.0-122				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3351160-1 10/16/18 01:44 • (LCSD) R3351160-2 10/16/18 02:07

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
(S) 2-Fluorobiphenyl				59.2	62.2	15.0-120				
(S) p-Terphenyl-d14				62.8	62.2	10.0-120				
(S) Phenol-d5				52.9	55.4	10.0-120				
(S) 2-Fluorophenol				59.8	63.7	12.0-120				
(S) 2,4,6-Tribromophenol				72.7	71.0	10.0-127				

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

L1034216-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1034216-04 10/16/18 03:18 • (MS) R3351160-4 10/16/18 03:41 • (MSD) R3351160-5 10/16/18 04:05

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Acenaphthene	0.666	ND	0.336	0.377	50.5	56.6	1	18.0-120			11.5	32
Acenaphthylene	0.666	ND	0.318	0.357	47.7	53.6	1	25.0-120			11.6	32
Anthracene	0.666	ND	0.372	0.399	55.9	59.9	1	22.0-120			7.00	29
Benzidine	0.666	ND	0.137	0.130	20.6	19.5	1	1.00-120			5.24	40
Benzo(a)anthracene	0.666	ND	0.420	0.437	63.1	65.6	1	25.0-120			3.97	29
Benzo(b)fluoranthene	0.666	ND	0.409	0.438	61.4	65.8	1	19.0-122			6.85	31
Benzo(k)fluoranthene	0.666	ND	0.432	0.441	64.9	66.2	1	23.0-120			2.06	30
Benzo(g,h,i)perylene	0.666	ND	0.468	0.490	70.3	73.6	1	10.0-120			4.59	33
Benzo(a)pyrene	0.666	ND	0.416	0.432	62.5	64.9	1	24.0-120			3.77	30
Bis(2-chlorethoxy)methane	0.666	ND	0.231	0.283	34.7	42.5	1	10.0-120			20.2	34
Bis(2-chloroethyl)ether	0.666	ND	0.214	0.284	32.1	42.6	1	10.0-120			28.1	40
Bis(2-chloroisopropyl)ether	0.666	ND	0.205	0.266	30.8	39.9	1	10.0-120			25.9	40
4-Bromophenyl-phenylether	0.666	ND	0.371	0.401	55.7	60.2	1	27.0-120			7.77	30
2-Chloronaphthalene	0.666	ND	0.278	0.333	41.7	50.0	1	20.0-120			18.0	32
4-Chlorophenyl-phenylether	0.666	ND	0.355	0.364	53.3	54.7	1	24.0-120			2.50	29
Chrysene	0.666	ND	0.415	0.434	62.3	65.2	1	21.0-120			4.48	29
Dibenz(a,h)anthracene	0.666	ND	0.424	0.440	63.7	66.1	1	10.0-120			3.70	32
3,3-Dichlorobenzidine	0.666	ND	0.399	0.419	59.9	62.9	1	10.0-120			4.89	34
2,4-Dinitrotoluene	0.666	ND	0.437	0.446	65.6	67.0	1	30.0-120			2.04	31
2,6-Dinitrotoluene	0.666	ND	0.393	0.406	59.0	61.0	1	25.0-120			3.25	31
Fluoranthene	0.666	ND	0.447	0.458	67.1	68.8	1	18.0-126			2.43	32
Fluorene	0.666	ND	0.376	0.393	56.5	59.0	1	25.0-120			4.42	30
Hexachlorobenzene	0.666	ND	0.397	0.408	59.6	61.3	1	27.0-120			2.73	28
Hexachloro-1,3-butadiene	0.666	ND	0.257	0.317	38.6	47.6	1	10.0-120			20.9	38
Hexachlorocyclopentadiene	0.666	ND	0.200	0.238	30.0	35.7	1	10.0-120			17.4	40
Hexachloroethane	0.666	ND	0.215	0.276	32.3	41.4	1	10.0-120			24.8	40
Indeno(1,2,3-cd)pyrene	0.666	ND	0.448	0.473	67.3	71.0	1	10.0-120			5.43	32
Isophorone	0.666	ND	0.256	0.313	38.4	47.0	1	13.0-120			20.0	34



L1034216-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1034216-04 10/16/18 03:18 • (MS) R3351160-4 10/16/18 03:41 • (MSD) R3351160-5 10/16/18 04:05

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Naphthalene	0.666	ND	0.229	0.300	34.4	45.0	1	10.0-120			26.8	35
Nitrobenzene	0.666	ND	0.250	0.318	37.5	47.7	1	10.0-120			23.9	36
n-Nitrosodimethylamine	0.666	ND	0.167	0.216	25.1	32.4	1	10.0-127			25.6	40
n-Nitrosodiphenylamine	0.666	ND	0.386	0.401	58.0	60.2	1	17.0-120			3.81	29
n-Nitrosodi-n-propylamine	0.666	ND	0.238	0.289	35.7	43.4	1	10.0-120			19.4	37
Phenanthrene	0.666	ND	0.392	0.409	58.9	61.4	1	17.0-120			4.24	31
Benzylbutyl phthalate	0.666	ND	0.427	0.441	64.1	66.2	1	23.0-120			3.23	30
Bis(2-ethylhexyl)phthalate	0.666	ND	0.420	0.429	63.1	64.4	1	17.0-126			2.12	30
Di-n-butyl phthalate	0.666	ND	0.449	0.448	67.4	67.3	1	30.0-120			0.223	29
Diethyl phthalate	0.666	ND	0.417	0.433	62.6	65.0	1	26.0-120			3.76	28
Dimethyl phthalate	0.666	ND	0.376	0.396	56.5	59.5	1	25.0-120			5.18	29
Di-n-octyl phthalate	0.666	ND	0.431	0.433	64.7	65.0	1	21.0-123			0.463	29
Pyrene	0.666	ND	0.430	0.443	64.6	66.5	1	16.0-121			2.98	32
1,2,4-Trichlorobenzene	0.666	ND	0.234	0.293	35.1	44.0	1	12.0-120			22.4	37
4-Chloro-3-methylphenol	0.666	ND	0.348	0.378	52.3	56.8	1	15.0-120			8.26	30
2-Chlorophenol	0.666	ND	0.250	0.305	37.5	45.8	1	15.0-120			19.8	37
2,4-Dichlorophenol	0.666	ND	0.292	0.356	43.8	53.5	1	20.0-120			19.8	31
2,4-Dimethylphenol	0.666	ND	0.313	0.383	47.0	57.5	1	10.0-120			20.1	33
4,6-Dinitro-2-methylphenol	0.666	ND	0.316	0.455	47.4	68.3	1	10.0-120			36.1	39
2,4-Dinitrophenol	0.666	ND	0.241	0.436	36.2	65.5	1	10.0-121		J3	57.6	40
2-Nitrophenol	0.666	ND	0.256	0.323	38.4	48.5	1	12.0-120			23.1	39
4-Nitrophenol	0.666	ND	0.336	0.348	50.5	52.3	1	10.0-137			3.51	32
Pentachlorophenol	0.666	ND	0.391	0.438	58.7	65.8	1	10.0-160			11.3	31
Phenol	0.666	ND	0.280	0.331	42.0	49.7	1	12.0-120			16.7	38
2,4,6-Trichlorophenol	0.666	ND	0.329	0.355	49.4	53.3	1	19.0-120			7.60	32
(S) Nitrobenzene-d5					37.5	47.4		10.0-122				
(S) 2-Fluorobiphenyl					45.3	51.4		15.0-120				
(S) p-Terphenyl-d14					57.1	58.6		10.0-120				
(S) Phenol-d5					41.6	48.0		10.0-120				
(S) 2-Fluorophenol					43.5	53.0		12.0-120				
(S) 2,4,6-Tribromophenol					63.7	63.4		10.0-127				

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Method Blank (MB)

(MB) R3351891-3 10/18/18 09:51

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acenaphthene	U		0.000316	0.00100
Acenaphthylene	U		0.000309	0.00100
Anthracene	U		0.000291	0.00100
Benzidine	U		0.00432	0.0100
Benzo(a)anthracene	U		0.0000975	0.00100
Benzo(b)fluoranthene	U		0.0000896	0.00100
Benzo(k)fluoranthene	U		0.000355	0.00100
Benzo(g,h,i)perylene	U		0.000161	0.00100
Benzo(a)pyrene	U		0.000340	0.00100
Bis(2-chlorethoxy)methane	U		0.000329	0.0100
Bis(2-chloroethyl)ether	U		0.00162	0.0100
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100
4-Bromophenyl-phenylether	U		0.000335	0.0100
2-Chloronaphthalene	U		0.000330	0.00100
4-Chlorophenyl-phenylether	U		0.000303	0.0100
Chrysene	U		0.000332	0.00100
Dibenz(a,h)anthracene	U		0.000279	0.00100
3,3-Dichlorobenzidine	U		0.00202	0.0100
2,4-Dinitrotoluene	U		0.00165	0.0100
2,6-Dinitrotoluene	U		0.000279	0.0100
Fluoranthene	U		0.000310	0.00100
Fluorene	U		0.000323	0.00100
Hexachlorobenzene	U		0.000341	0.00100
Hexachloro-1,3-butadiene	U		0.000329	0.0100
Hexachlorocyclopentadiene	U		0.00233	0.0100
Hexachloroethane	U		0.000365	0.0100
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100
Isophorone	U		0.000272	0.0100
Naphthalene	U		0.000372	0.00100
Nitrobenzene	U		0.000367	0.0100
n-Nitrosodimethylamine	U		0.00126	0.0100
n-Nitrosodiphenylamine	U		0.00119	0.0100
n-Nitrosodi-n-propylamine	U		0.000403	0.0100
Phenanthrene	U		0.000366	0.00100
Benzylbutyl phthalate	U		0.000275	0.00300
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300
Di-n-butyl phthalate	U		0.000266	0.00300
Diethyl phthalate	U		0.000282	0.00300
Dimethyl phthalate	U		0.000283	0.00300
Di-n-octyl phthalate	U		0.000278	0.00300

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3351891-3 10/18/18 09:51

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Pyrene	U		0.000330	0.00100
1,2,4-Trichlorobenzene	U		0.000355	0.0100
4-Chloro-3-methylphenol	U		0.000263	0.0100
2-Chlorophenol	U		0.000283	0.0100
2-Nitrophenol	U		0.000320	0.0100
4-Nitrophenol	U		0.00201	0.0100
Pentachlorophenol	U		0.000313	0.0100
Phenol	U		0.000334	0.0100
2,4,6-Trichlorophenol	U		0.000297	0.0100
2,4-Dichlorophenol	U		0.000284	0.0100
2,4-Dimethylphenol	U		0.000624	0.0100
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100
2,4-Dinitrophenol	U		0.00325	0.0100
(S) Nitrobenzene-d5	58.7			10.0-127
(S) 2-Fluorobiphenyl	64.6			10.0-130
(S) p-Terphenyl-d14	76.0			10.0-128
(S) Phenol-d5	22.7			10.0-120
(S) 2-Fluorophenol	39.4			10.0-120
(S) 2,4,6-Tribromophenol	38.9			10.0-155

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3351891-1 10/18/18 09:04 • (LCSD) R3351891-2 10/18/18 09:28

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.0500	0.0379	0.0360	75.8	72.0	41.0-120			5.14	22
Acenaphthylene	0.0500	0.0380	0.0360	76.0	72.0	43.0-120			5.41	22
Anthracene	0.0500	0.0367	0.0358	73.4	71.6	45.0-120			2.48	20
Benzidine	0.0500	0.00613	0.0101	12.3	20.2	1.00-120		J3	48.9	36
Benzo(a)anthracene	0.0500	0.0380	0.0373	76.0	74.6	47.0-120			1.86	20
Benzo(b)fluoranthene	0.0500	0.0400	0.0395	80.0	79.0	46.0-120			1.26	20
Benzo(k)fluoranthene	0.0500	0.0414	0.0405	82.8	81.0	46.0-120			2.20	21
Benzo(g,h,i)perylene	0.0500	0.0392	0.0393	78.4	78.6	48.0-121			0.255	20
Benzo(a)pyrene	0.0500	0.0385	0.0377	77.0	75.4	47.0-120			2.10	20
Bis(2-chlorethoxy)methane	0.0500	0.0331	0.0313	66.2	62.6	33.0-120			5.59	24
Bis(2-chloroethyl)ether	0.0500	0.0360	0.0345	72.0	69.0	23.0-120			4.26	33
Bis(2-chloroisopropyl)ether	0.0500	0.0350	0.0331	70.0	66.2	28.0-120			5.58	31
4-Bromophenyl-phenylether	0.0500	0.0371	0.0353	74.2	70.6	45.0-120			4.97	20
2-Chloronaphthalene	0.0500	0.0377	0.0351	75.4	70.2	37.0-120			7.14	25



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3351891-1 10/18/18 09:04 • (LCSD) R3351891-2 10/18/18 09:28

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
4-Chlorophenyl-phenylether	0.0500	0.0391	0.0376	78.2	75.2	44.0-120			3.91	20
Chrysene	0.0500	0.0382	0.0376	76.4	75.2	48.0-120			1.58	20
Dibenz(a,h)anthracene	0.0500	0.0388	0.0384	77.6	76.8	47.0-120			1.04	20
3,3-Dichlorobenzidine	0.0500	0.0348	0.0338	69.6	67.6	44.0-120			2.92	20
2,4-Dinitrotoluene	0.0500	0.0370	0.0365	74.0	73.0	49.0-124			1.36	20
2,6-Dinitrotoluene	0.0500	0.0368	0.0360	73.6	72.0	46.0-120			2.20	21
Fluoranthene	0.0500	0.0406	0.0395	81.2	79.0	51.0-120			2.75	20
Fluorene	0.0500	0.0406	0.0381	81.2	76.2	47.0-120			6.35	20
Hexachlorobenzene	0.0500	0.0376	0.0373	75.2	74.6	44.0-120			0.801	20
Hexachloro-1,3-butadiene	0.0500	0.0289	0.0288	57.8	57.6	19.0-120			0.347	32
Hexachlorocyclopentadiene	0.0500	0.0234	0.0219	46.8	43.8	15.0-120			6.62	31
Hexachloroethane	0.0500	0.0324	0.0315	64.8	63.0	15.0-120			2.82	37
Indeno(1,2,3-cd)pyrene	0.0500	0.0396	0.0394	79.2	78.8	49.0-122			0.506	20
Isophorone	0.0500	0.0353	0.0334	70.6	66.8	36.0-120			5.53	23
Naphthalene	0.0500	0.0314	0.0299	62.8	59.8	27.0-120			4.89	27
Nitrobenzene	0.0500	0.0349	0.0325	69.8	65.0	27.0-120			7.12	29
n-Nitrosodimethylamine	0.0500	0.0267	0.0243	53.4	48.6	10.0-120			9.41	40
n-Nitrosodiphenylamine	0.0500	0.0380	0.0366	76.0	73.2	47.0-120			3.75	20
n-Nitrosodi-n-propylamine	0.0500	0.0393	0.0374	78.6	74.8	31.0-120			4.95	28
Phenanthrene	0.0500	0.0371	0.0361	74.2	72.2	46.0-120			2.73	20
Benzylbutyl phthalate	0.0500	0.0352	0.0351	70.4	70.2	43.0-121			0.284	20
Bis(2-ethylhexyl)phthalate	0.0500	0.0364	0.0358	72.8	71.6	43.0-122			1.66	20
Di-n-butyl phthalate	0.0500	0.0372	0.0358	74.4	71.6	49.0-121			3.84	20
Diethyl phthalate	0.0500	0.0410	0.0396	82.0	79.2	48.0-122			3.47	20
Dimethyl phthalate	0.0500	0.0391	0.0379	78.2	75.8	48.0-120			3.12	20
Di-n-octyl phthalate	0.0500	0.0356	0.0352	71.2	70.4	42.0-125			1.13	20
Pyrene	0.0500	0.0410	0.0405	82.0	81.0	47.0-120			1.23	20
1,2,4-Trichlorobenzene	0.0500	0.0303	0.0292	60.6	58.4	24.0-120			3.70	29
4-Chloro-3-methylphenol	0.0500	0.0362	0.0354	72.4	70.8	40.0-120			2.23	21
2-Chlorophenol	0.0500	0.0350	0.0331	70.0	66.2	25.0-120			5.58	35
2,4-Dichlorophenol	0.0500	0.0353	0.0333	70.6	66.6	36.0-120			5.83	26
2,4-Dimethylphenol	0.0500	0.0343	0.0321	68.6	64.2	33.0-120			6.63	26
4,6-Dinitro-2-methylphenol	0.0500	0.0334	0.0325	66.8	65.0	38.0-138			2.73	25
2,4-Dinitrophenol	0.0500	0.0310	0.0312	62.0	62.4	10.0-120			0.643	39
2-Nitrophenol	0.0500	0.0345	0.0325	69.0	65.0	31.0-120			5.97	29
4-Nitrophenol	0.0500	0.0148	0.0148	29.6	29.6	10.0-120			0.000	33
Pentachlorophenol	0.0500	0.0345	0.0352	69.0	70.4	23.0-120			2.01	25
Phenol	0.0500	0.0154	0.0147	30.8	29.4	10.0-120			4.65	36
2,4,6-Trichlorophenol	0.0500	0.0389	0.0370	77.8	74.0	42.0-120			5.01	23
(S) Nitrobenzene-d5				64.9	61.2	10.0-127				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3351891-1 10/18/18 09:04 • (LCSD) R3351891-2 10/18/18 09:28

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
(S) 2-Fluorobiphenyl				68.6	61.8	10.0-130				
(S) p-Terphenyl-d14				77.6	75.8	10.0-128				
(S) Phenol-d5				28.4	26.7	10.0-120				
(S) 2-Fluorophenol				48.4	44.9	10.0-120				
(S) 2,4,6-Tribromophenol				62.5	60.5	10.0-155				

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3351178-3 10/15/18 09:39

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Anthracene	U		0.0000140	0.0000500
Acenaphthene	U		0.0000100	0.0000500
Acenaphthylene	U		0.0000120	0.0000500
Benzo(a)anthracene	U		0.00000410	0.0000500
Benzo(a)pyrene	U		0.0000116	0.0000500
Benzo(b)fluoranthene	U		0.00000212	0.0000500
Benzo(g,h,i)perylene	U		0.00000227	0.0000500
Benzo(k)fluoranthene	U		0.0000136	0.0000500
Chrysene	U		0.0000108	0.0000500
Dibenz(a,h)anthracene	U		0.00000396	0.0000500
Fluoranthene	U		0.0000157	0.0000500
Fluorene	U		0.00000850	0.0000500
Indeno(1,2,3-cd)pyrene	U		0.0000148	0.0000500
Naphthalene	0.0000227	J	0.0000198	0.000250
Phenanthrene	U		0.00000820	0.0000500
Pyrene	U		0.0000117	0.0000500
1-Methylnaphthalene	U		0.00000821	0.000250
2-Methylnaphthalene	U		0.00000902	0.000250
2-Chloronaphthalene	U		0.00000647	0.000250
(S) Nitrobenzene-d5	69.0			31.0-160
(S) 2-Fluorobiphenyl	84.0			48.0-148
(S) p-Terphenyl-d14	83.5			37.0-146

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3351178-1 10/15/18 08:55 • (LCSD) R3351178-2 10/15/18 09:17

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Anthracene	0.00200	0.00200	0.00206	100	103	67.0-150			2.96	20
Acenaphthene	0.00200	0.00154	0.00164	77.0	82.0	65.0-138			6.29	20
Acenaphthylene	0.00200	0.00162	0.00171	81.0	85.5	66.0-140			5.41	20
Benzo(a)anthracene	0.00200	0.00159	0.00150	79.5	75.0	61.0-140			5.83	20
Benzo(a)pyrene	0.00200	0.00185	0.00184	92.5	92.0	60.0-143			0.542	20
Benzo(b)fluoranthene	0.00200	0.00159	0.00156	79.5	78.0	58.0-141			1.90	20
Benzo(g,h,i)perylene	0.00200	0.00198	0.00196	99.0	98.0	52.0-153			1.02	20
Benzo(k)fluoranthene	0.00200	0.00205	0.00207	102	103	58.0-148			0.971	20
Chrysene	0.00200	0.00219	0.00224	109	112	64.0-144			2.26	20
Dibenz(a,h)anthracene	0.00200	0.00189	0.00193	94.5	96.5	52.0-155			2.09	20
Fluoranthene	0.00200	0.00223	0.00224	111	112	69.0-153			0.447	20



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3351178-1 10/15/18 08:55 • (LCSD) R3351178-2 10/15/18 09:17

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Fluorene	0.00200	0.00146	0.00150	73.0	75.0	64.0-136			2.70	20
Indeno(1,2,3-cd)pyrene	0.00200	0.00196	0.00194	98.0	97.0	54.0-153			1.03	20
Naphthalene	0.00200	0.00138	0.00148	69.0	74.0	61.0-137			6.99	20
Phenanthrene	0.00200	0.00164	0.00166	82.0	83.0	62.0-137			1.21	20
Pyrene	0.00200	0.00167	0.00164	83.5	82.0	60.0-142			1.81	20
1-Methylnaphthalene	0.00200	0.00150	0.00162	75.0	81.0	66.0-142			7.69	20
2-Methylnaphthalene	0.00200	0.00141	0.00151	70.5	75.5	62.0-136			6.85	20
2-Chloronaphthalene	0.00200	0.00141	0.00152	70.5	76.0	64.0-140			7.51	20
<i>(S) Nitrobenzene-d5</i>				71.5	70.5	31.0-160				
<i>(S) 2-Fluorobiphenyl</i>				81.5	80.0	48.0-148				
<i>(S) p-Terphenyl-d14</i>				85.5	84.5	37.0-146				

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3351667-1 10/16/18 10:56

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00600	0.00600
Acenaphthene	U		0.00600	0.00600
Acenaphthylene	U		0.00600	0.00600
Benzo(a)anthracene	U		0.00600	0.00600
Benzo(a)pyrene	U		0.00600	0.00600
Benzo(b)fluoranthene	U		0.00600	0.00600
Benzo(g,h,i)perylene	U		0.00600	0.00600
Benzo(k)fluoranthene	U		0.00600	0.00600
Chrysene	U		0.00600	0.00600
Dibenz(a,h)anthracene	U		0.00600	0.00600
Fluoranthene	U		0.00600	0.00600
Fluorene	U		0.00600	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00600	0.00600
Naphthalene	U		0.00200	0.0200
Phenanthrene	U		0.00600	0.00600
Pyrene	U		0.00600	0.00600
1-Methylnaphthalene	U		0.00200	0.0200
2-Methylnaphthalene	U		0.00200	0.0200
2-Chloronaphthalene	U		0.00200	0.0200
(S) Nitrobenzene-d5	93.6			14.0-149
(S) 2-Fluorobiphenyl	83.2			34.0-125
(S) p-Terphenyl-d14	79.0			23.0-120

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3351667-2 10/16/18 11:17 • (LCSD) R3351667-3 10/16/18 11:38

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0800	0.0668	0.0667	83.5	83.4	50.0-126			0.150	20
Acenaphthene	0.0800	0.0693	0.0693	86.6	86.6	50.0-120			0.000	20
Acenaphthylene	0.0800	0.0709	0.0709	88.6	88.6	50.0-120			0.000	20
Benzo(a)anthracene	0.0800	0.0644	0.0628	80.5	78.5	45.0-120			2.52	20
Benzo(a)pyrene	0.0800	0.0535	0.0551	66.9	68.9	42.0-120			2.95	20
Benzo(b)fluoranthene	0.0800	0.0625	0.0585	78.1	73.1	42.0-121			6.61	20
Benzo(g,h,i)perylene	0.0800	0.0646	0.0620	80.7	77.5	45.0-125			4.11	20
Benzo(k)fluoranthene	0.0800	0.0623	0.0635	77.9	79.4	49.0-125			1.91	20
Chrysene	0.0800	0.0673	0.0646	84.1	80.7	49.0-122			4.09	20
Dibenz(a,h)anthracene	0.0800	0.0673	0.0658	84.1	82.3	47.0-125			2.25	20
Fluoranthene	0.0800	0.0664	0.0653	83.0	81.6	49.0-129			1.67	20



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3351667-2 10/16/18 11:17 • (LCSD) R3351667-3 10/16/18 11:38

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Fluorene	0.0800	0.0703	0.0705	87.9	88.1	49.0-120			0.284	20
Indeno(1,2,3-cd)pyrene	0.0800	0.0668	0.0644	83.5	80.5	46.0-125			3.66	20
Naphthalene	0.0800	0.0643	0.0644	80.4	80.5	50.0-120			0.155	20
Phenanthrene	0.0800	0.0672	0.0660	84.0	82.5	47.0-120			1.80	20
Pyrene	0.0800	0.0589	0.0576	73.6	72.0	43.0-123			2.23	20
1-Methylnaphthalene	0.0800	0.0648	0.0644	81.0	80.5	51.0-121			0.619	20
2-Methylnaphthalene	0.0800	0.0585	0.0586	73.1	73.3	50.0-120			0.171	20
2-Chloronaphthalene	0.0800	0.0656	0.0655	82.0	81.9	50.0-120			0.153	20
(S) Nitrobenzene-d5				91.8	92.1	14.0-149				
(S) 2-Fluorobiphenyl				76.4	75.8	34.0-125				
(S) p-Terphenyl-d14				74.1	71.9	23.0-120				

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

L1034293-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1034293-02 10/16/18 17:59 • (MS) R3351667-4 10/16/18 18:20 • (MSD) R3351667-5 10/16/18 18:41

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0905	ND	0.0588	0.0624	64.9	70.0	1	10.0-145			6.00	30
Acenaphthene	0.0905	ND	0.0569	0.0602	62.8	67.5	1	14.0-127			5.64	27
Acenaphthylene	0.0905	ND	0.0602	0.0612	66.5	68.6	1	21.0-124			1.69	25
Benzo(a)anthracene	0.0905	ND	0.0554	0.0619	61.2	69.4	1	10.0-139			11.1	30
Benzo(a)pyrene	0.0905	ND	0.0533	0.0589	58.9	66.1	1	10.0-141			9.93	31
Benzo(b)fluoranthene	0.0905	ND	0.0500	0.0639	55.3	71.7	1	10.0-140			24.4	36
Benzo(g,h,i)perylene	0.0905	ND	0.0532	0.0561	58.8	62.9	1	10.0-140			5.20	33
Benzo(k)fluoranthene	0.0905	ND	0.0533	0.0496	58.9	55.6	1	10.0-137			7.29	31
Chrysene	0.0905	ND	0.0542	0.0613	59.9	68.8	1	10.0-145			12.2	30
Dibenz(a,h)anthracene	0.0905	ND	0.0561	0.0527	61.9	59.1	1	10.0-132			6.28	31
Fluoranthene	0.0905	0.0102	0.0572	0.0787	51.9	76.8	1	10.0-153			31.6	33
Fluorene	0.0905	ND	0.0604	0.0636	66.7	71.3	1	11.0-130			5.14	29
Indeno(1,2,3-cd)pyrene	0.0905	ND	0.0545	0.0568	60.2	63.6	1	10.0-137			4.09	32
Naphthalene	0.0905	ND	0.0546	0.0619	60.3	69.4	1	10.0-135			12.5	27
Phenanthrene	0.0905	ND	0.0555	0.0690	61.3	77.4	1	10.0-144			21.7	31
Pyrene	0.0905	0.0177	0.0535	0.0740	39.4	63.1	1	10.0-148			32.3	35
1-Methylnaphthalene	0.0905	ND	0.0546	0.0701	51.2	69.3	1	10.0-142			24.8	28
2-Methylnaphthalene	0.0905	ND	0.0505	0.0648	48.5	65.3	1	10.0-137			24.9	28
2-Chloronaphthalene	0.0905	ND	0.0542	0.0545	59.9	61.1	1	29.0-120			0.418	24
(S) Nitrobenzene-d5					79.9	69.4		14.0-149				
(S) 2-Fluorobiphenyl					58.8	52.5		34.0-125				
(S) p-Terphenyl-d14					55.3	56.1		23.0-120				



Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Qualifier	Description
B	The same analyte is found in the associated blank.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
V	The sample concentration is too high to evaluate accurate spike recoveries.



Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
 * Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico ¹	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	90010	South Carolina	84004
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana ¹	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

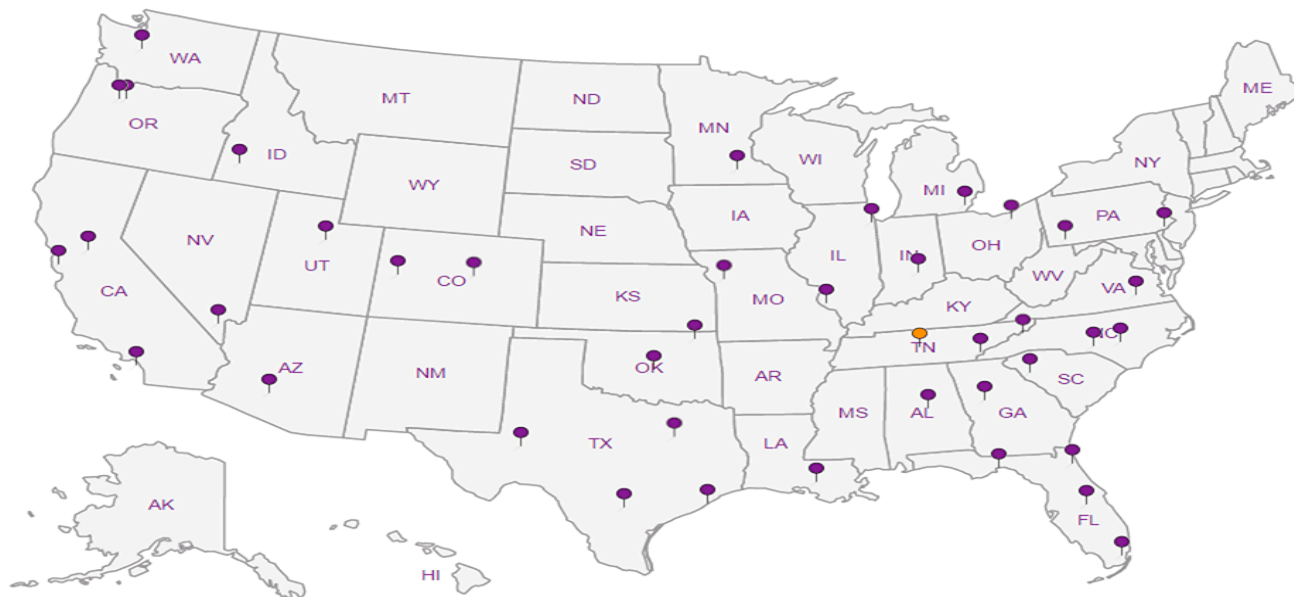
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

PPM Consultants - MS

289 Commerce Park Drive, Suite D
Ridgeland, MS 39157

Billing Information:
Accounts Payable
289 Commerce Park Drive, Suite D
Ridgeland, MS 39157

Report to:
Mr. Beau Hale

Email To: beau.hale@ppmco.com
reagan_byrd@ppmco.com

Project Description: **Teters Floral Property**

City/State Collected: **Louisville, MS**

Phone: 601-956-8233
Fax: 601-720-0747

Client Project #
30065901-TO 15

Lab Project #
PPMCONMS-HALE

Collected by (print):
Reagan Byrd

Site/Facility ID #

P.O. #

Collected by (signature):
Reagan Byrd

Rush? (Lab MUST Be Notified)

Quote #

Date Results Needed

Immediately Packed on Ice: N Y

Same Day Five Day
 Next Day 5 Day (Rad Only)
 Two Day 10 Day (Rad Only)
 Three Day

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 2 of 4



12055 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



L # **L1034 216**

Tab **G178**

Acctnum: **PPMCONMS**

Template: **T141478**

Prelogin: **P675827**

TSR: **034 - Craig Cothron**

PB: **10-3-186**

Shipped Via: **FedEx Ground**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	8270 100ml Amb NoPres	CN 250mlHDPEAmb-NaOH	CN 40zClr-NoPres	DROLVI 40mlAmb-HCl-BT	GRO / VOC SCREEN 2ozClr-NoPres	GRO 40mlAmb HCl	MRCRA8 250mlHDPE-HNO3	MRCRA8 2ozClr-NoPres	PAHSIMLVI 40mlAmb-NoPres-WT	SV8270 4ozClr-NoPres	Remarks	Sample # (lab only)
SB-1	0'-4'	Grab	SS	0'-4'	10/8/18	12:57			X					X				-01
SB-2	0'-4'	Grab	SS	0'-4'	10/8/18	14:58			X					X				-02
SB-3	0'-4'	Grab	SS	0'-4'	10/8/18	16:01			X					X				-03
SB-4	8'-10'	Grab	SS	8'-10'	10/9/18	9:45			X					X		X		-04
SB-5	4'-8'	Grab	SS	4'-8'	10/9/18	8:10			X					X				-05
SB-6	8'-12'	Grab	SS	8'-12'	10/9/18	10:42				X								-06
SB-7	0'-4'	Grab	SS	0'-4'	10/9/18	11:54			X					X				-07
SB-8	0'-4'	Grab	SS	0'-4'	10/9/18	13:19			X					X			FAD SCREEN 0.5-1047	-08
SB-9	0'-4'	Grab	SS	0'-4'	10/9/18	14:37			X					X				-09
SB-10	Duplicate	Grab	SS	-	10/9/18	-												-10

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks:
Handwritten notes and signatures

pH _____ Temp _____
Flow _____ Other _____

Sample Receipt Checklist
COC Seal Present/Intact: Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VCA Zero Headspace: Y N
Preservation Correct/Checked: Y N

Samples returned via:
 UPS FedEx Courier

Tracking #

Relinquished by: (Signature) <i>Reagan M (PPM)</i>	Date: 10/11/18	Time: 11:00	Received by: (Signature) <i>FedEx</i>	Trip Blank Received: <input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No HCL / MeOH TBR	Temp: 20 °C 0.887	Bottles Received: 100+TBR	If preservation required by Login: Date/Time
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)				
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <i>Reagan M</i>	Date: 10/12/18	Time: 8:45	Hold:	Condition: NCF / <input checked="" type="checkbox"/> OK

PPM Consultants - MS
 289 Commerce Park Drive, Suite D
 Ridgeland, MS 39157

Billing Information:
Accounts Payable
 289 Commerce Park Drive, Suite D
 Ridgeland, MS 39157

Chain of Custody Page 1 of 10

Pres Chk

Analysis / Container / Preservative

12065 Leblason Rd
 Mount Juliet, TN 37122
 Phone: 615-758-5858
 Phone: 800-767-5859
 Fax: 615-758-5859

Pace Analytical
 National Center for Testing & Innovation

82065 Leblason Rd
 Mount Juliet, TN 37122
 Phone: 615-758-5858
 Phone: 800-767-5859
 Fax: 615-758-5859

Report to:
Mr. Beau Hale

Email To: beau.hale@ppmco.com
 regan.byrd@ppmco.com

Project Description: **Teters Floral Property**

City/State Collected: **Louisville, MS**

Phone: **601-956-8233**
 Fax: **601-720-0747**

Client Project #
30065901-TO15

Lab Project #
PPMCONMS-HALE

Collected by (print):
Regan Byrd

Site/Facility ID #

P.O. #

Collected by (signature):
Regan Byrd

Rush? (Lab MUST Be Notified)
 Same Day Five Day
 Next Day 5 Day (Rad Only)
 Two Day 10 Day (Rad Only)
 Three Day

Quote #

Date Results Needed

Immediately Packed on Ice **N** **Y**

No. of Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	SVOCS 4ozClr-NoPres	V8260 40mlAmb-HCl	V8260 40mlAmb/MeOH5ml/Syr	V8260BTEX 40mlAmb-HCl	V8260BTEX 40mlAmb/MeOH5ml/Syr	VOC SCREEN 2ozClr-NoPres	Remarks	Sample # (lab only)
✓ SB-1	0-4'	Grab	SS	0-4'	10/8/18	12:57			X			X		-01
✓ SB-2	0-4'	Grab	SS	0-4'	10/8/18	14:58			X			X		-02
✓ SB-3	0-4'	Grab	SS	0-4'	10/8/18	16:01			X			X		-03
✓ SB-4	8-10'	Grab	SS	8-10'	10/9/18	9:45			X			X		-04
✓ SB-5	4-8'	Grab	SS	4-8'	10/9/18	8:10			X			X		-05
✓ SB-6	8-12'	Grab	SS	8-12'	10/9/18	10:42	X				X			-06
✓ SB-7	0-4'	Grab	SS	0-4'	10/9/18	11:54			X			X		-07
✓ SB-8	0-4'	Grab	SS	0-4'	10/9/18	13:19			X			X		-08
✓ SB-9	0-4'	Grab	SS	0-4'	10/9/18	14:37			X			X	RAD SCREEN: <0.5 m/Vhr	-09
✓ SB-10	Duplicate	Grab	SS	—	10/9/18	—			X			X		-10

* Matrix:
 SS - Soil AIR - Air F - Filter
 GW - Groundwater B - Bioassay
 WW - WasteWater
 DW - Drinking Water
 OT - Other

Remarks:
~~PPMCONMS-HALE~~

Samples returned via:
 UPS FedEx Courier

Tracking #

pH _____ Temp _____
 Flow _____ Other _____

Sample Receipt Checklist
 COC Seal Present/Intact: Y N
 COC Signed/Accurate: Y N
 Bottles arrive intact: Y N
 Correct bottles used: Y N
 Sufficient volume sent: Y N
 If Applicable
 VOA Zero Headspace: Y N
 Preservation Correct/Checked: Y N

Relinquished by: (Signature)
Regan M (PPM)

Date: **10/11/18** Time: **16:00**

Received by: (Signature)
FedEx 4024 2995 2906

Trip Blank Received: Yes / No
4
 HCL / MeOH
 TBR

Temp: **±0** °C
0.8 °C

Bottles Received: **106+40B**

If preservation required by Login: Date/Time

Relinquished by: (Signature)
Regan M

Date: **10/12/18** Time: **8:45**

Received for lab by: (Signature)
Regan M

Date: **10/12/18** Time: **8:45**

Hold:

Condition:
 NCF

PPM Consultants - MS
 289 Commerce Park Drive, Suite D
 Ridgeland, MS 39157

Billing Information:
Accounts Payable
 289 Commerce Park Drive, Suite D
 Ridgeland, MS 39157

Report to:
Mr. Beau Hale

Project Description: **Teters Floral Property**

City/State Collected: **Louisville, MS**

Phone: **601-956-8233**
 Fax: **601-720-0747**

Client Project # **30065901-TO15**
 Lab Project # **PPMCONMS-HALE**

Collected by (print): **Regan Byrd**
 Collected by (signature): *Regan Byrd*

Immediately Packed on Ice **N** **Y**

Email To: **beau.hale@ppmco.com**
regan.byrd@ppmco.com

City/State Collected: **Louisville, MS**

Lab Project # **PPMCONMS-HALE**

Site/Facility ID #

P.O. #

Quote #

Rush? (Lab MUST Be Notified)
 Same Day Five Day
 Next Day 5 Day (Rad Only)
 Two Day 10 Day (Rad Only)
 Three Day

Date Results Needed

Pres Chk

Analysis / Container / Preservative

82/0 100ml Amb NoPres	CN 250mlHDPEAmb-NaOH	CN 4ozClr-NoPres	DROLV: 40mlAmb-HCl-BT	GRO / VOC SCREEN 2ozClr-NoPres	GRO 40mlAmb HCl	MRCRA8 250mlHDPE-HNO3	MRCRA8 2ozClr-NoPres	PAHSIMLVI 40mlAmb-NoPres-WT	SV8270 4ozClr-NoPres
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Chain of Custody Page **4** of **12**

Pace Analytical
 National Center for Testing & Innovation

12065 Lebanon Rd
 Mount Juliet, TN 37122
 Phone: 615-758-5858
 Phone: 800-767-5859
 Fax: 615-758-5859

L# **L103426**

Table #

Acctnum: **PPMCONMS**
 Template: **T141478**
 Prelogin: **P675827**
 TSR: **034 - Craig Cothron**
 PB: *10-3-18*

Shipped Via: **FedEX Ground**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Intrs	82/0 100ml Amb NoPres	CN 250mlHDPEAmb-NaOH	CN 4ozClr-NoPres	DROLV: 40mlAmb-HCl-BT	GRO / VOC SCREEN 2ozClr-NoPres	GRO 40mlAmb HCl	MRCRA8 250mlHDPE-HNO3	MRCRA8 2ozClr-NoPres	PAHSIMLVI 40mlAmb-NoPres-WT	SV8270 4ozClr-NoPres	Remarks	Sample # (lab only)
✓ TW-1	Grab	GW		10/10/18	9:49	5		X					X					-11
✓ TW-2	Grab	GW		10/10/18	10:53	5		X					X					-12
✓ TW-3	Grab	GW		10/10/18	12:34	5		X					X					-13
✓ TW-4	Grab	GW		10/10/18	15:39	7	X	X					X					-14
✓ TW-5	Grab	GW		10/10/18	16:45	5		X					X					-15
✓ TW-6	Grab	GW		10/10/18	18:12	9				X		X			X			-16
TW-7	Grab	GW				5	X	X					X					
✓ TW-8	Grab	GW		10/11/18	10:47	5		X					X					-17
TW-9	Grab	GW				5	X	X					X					
✓ 10/10/18 Duplicate	Grab	GW		10/10/18		3												-18

* Matrix:
 SS - Soil AIR - Air F - Filter
 GW - Groundwater B - Bioassay
 WW - WasteWater
 DW - Drinking Water
 OT - Other

Remarks:

Samples returned via:
 UPS FedEx Courier

Tracking #

pH _____ Temp _____
 Flow _____ Other _____

Sample Receipt Checklist:
 COC Seal Present/Intact: Y N
 COC Signed/Accurate: Y N
 Bottles arrive intact: Y N
 Correct bottles used: Y N
 Sufficient volume sent: Y N
 If Applicable
 VOA Zero Headspace: Y N
 Preservation Correct/Checked: Y N

Relinquished by: (Signature) *Regan Byrd (PPM)* Date: **10/11/18** Time: **16:00**

Received by: (Signature) *FedEx* Tracking # **4624 2995 2917** Trip Blank Received: **4** (Yes/No) HCL/MeOH TBR

Temp: **35.5°C** Bottles Received: **100+4TB** If preservation required by Login: Date/Time

Relinquished by: (Signature) _____ Date: _____ Time: _____

Received for lab by: (Signature) *Regan Byrd* Date: **10/11/18** Time: **8:45** Hold: _____ Condition: **NCF / OK**

PPM Consultants - MS

289 Commerce Park Drive, Suite D
Ridgeland, MS 39157

Billing Information:
Accounts Payable
289 Commerce Park Drive, Suite D
Ridgeland, MS 39157

Report to:
Mr. Beau Hale

Email To: beau.hale@ppmco.com
regan.byrd@ppmco.com

Project Description: **Teters Floral Property**

City/State Collected: **Louisville, MS**

Phone: **601-956-8233**
Fax: **601-720-0747**

Client Project #
3005901-TO 15

Lab Project #
PPMCONMS-HALE

Collected by (print):
Regan Byrd

Site/Facility ID #

P.O. #

Collected by (signature):
Regan Byrd

Rush? (Lab MUST Be Notified)

Quote #

Immediately Packed on Ice **N** **Y**

Same Day Five Day
 Next Day 5 Day (Rad Only)
 Two Day 10 Day (Rad Only)
 Three Day

Date Results Needed

No. of

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of	Analysis / Container / Preservative	Chain of Custody
TW-1	Grab	GW		10/10/18	9:49	5	VOC: 4ozClr-NoPres	Page 3 of 5 12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-5859 Fax: 615-758-5859 QR Code L# L103426 Table # Acctnum: PPMCONMS Template: T141478 Prelogin: P675827 TSR: 034 - Craig Cothron PB: 10-3186 Shipped Via: FedEX Ground
TW-2	Grab	GW		10/10/18	10:53	5	V8260 40mlAmb-HCl	
TW-3	Grab	GW		10/10/18	12:34	5	V8260 40mlAmb/MeOH5ml/Syr	
TW-4	Grab	GW		10/10/18	15:39	7	V8260BTEX 40mlAmb-HCl	
TW-5	Grab	GW		10/10/18	16:45	5	V8260BTEX 40mlAmb/MeOH5ml/Syr	
TW-6	Grab	GW		10/10/18	18:12	9	VOC SCREEN 2ozClr-NoPres	
TW-7	Grab	GW		10/10/18	18:12	9	VOC SCREEN 2ozClr-NoPres	
TW-8	Grab	GW		10/11/18	10:47	5	V8260 40mlAmb-HCl	
TW-9	Grab	GW		10/11/18	10:47	5	V8260 40mlAmb-HCl	
Duplicate	Grab	GW		10/10/18		3	V8260 40mlAmb-HCl	

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks:
PH 7.0-7.5

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
 UPS FedEx Courier _____ Tracking # _____

Sample Receipt Checklist	
COC Seal Present/Intact:	NP <input type="checkbox"/> Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
COC Signed/Accurate:	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
Bottles arrive intact:	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
Correct bottles used:	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
Sufficient volume sent:	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
IF Applicable	
VOA Zero Headpace:	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>
Preservation Correct/Checked:	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>

Relinquished by: (Signature) <i>Regan Byrd (PPM)</i>	Date: 10/11/18	Time: 16:00	Received by: (Signature) <i>FedEx</i>	Trip Blnk Received: <input checked="" type="checkbox"/> / No HCL / MeOH TBR	Bottles Received: 4	If preservation required by Login: Date/Time
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 35.15 °C 35.15 °C	100 + 4TB	
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <i>Regan Byrd</i>	Date: 10/12/18	Time: 8:45	Hold: Condition: NCF / <input checked="" type="checkbox"/>

PPM Consultants - MS

289 Commerce Park Drive, Suite D
Ridgeland, MS 39157

Billing Information:

Accounts Payable
289 Commerce Park Drive, Suite D
Ridgeland, MS 39157

Pres
Click

Analysis / Container / Preservative

Chain of Custody Page 10 of 10



12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



Report to:
Mr. Beau Hale

Email To: beau.hale@ppmco.com
regan.byrd@ppmco.com

Project Description: **Letters Floral Property**

City/State Collected: **Louisville, MS**

Phone: **601-956-8233**
Fax: **601-720-0747**

Client Project #
30065901-TO15

Lab Project #
PPMCONMS-HALE

Collected by (print):
Regan Byrd

Site/Facility ID #

P.O. #

Collected by (signature):
Regan Byrd

Rush? (Lab MUST Be Notified)
 Same Day Five Day
 Next Day 5 Day (Rad Only)
 Two Day 10 Day (Rad Only)
 Three Day

Quote #
Date Results Needed

Immediately Packed on Ice: N Y

No. of
Cnts

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cnts	8270 100ml Air, 0 NoPres	CN 250mlHDPEAmb-NaOH	CN 4ozClr-NoPres	DROLVI 40mlAmb-HCl-BT	GRO / VOC SCREEN 2ozClr-NoPres	GRO 40mlAmb HCl	MRCRA8 250mlHDPE-HNO3	MRCRA8 2ozClr-NoPres	PAHSIMLVI 40mlAmb-NoPres-WT	SV8270 4ozClr-NoPres	Remarks	Sample # (lab only)
EQUIP RINSE S	Grab	GW		10/8/18	16:40	3												-19
EQUIP RINSE GW	Grab	GW		10/11/18	10:50	3												-20
FIELD BLANK 1	Grab	GW		10/11/18	8:56	3												-21
FIELD BLANK 2	Grab	GW		10/10/18	15:23	3												-22
FIELD BLANK 3	Grab	GW		10/8/18	15:20	3												-23
FIELD BLANK 4	Grab	GW																
FIELD BLANK 5	Grab	GW		10/9/18	10:45	3												-24

* Matrix:
 SS - Soil AIR - Air F - Filter
 GW - Groundwater B - Bioassay
 WW - WasteWater
 DW - Drinking Water
 OT - Other

Remarks:

Samples returned via:
 UPS FedEx Courier

Tracking #

pH _____ Temp _____
 Flow _____ Other _____

Sample Receipt Checklist

COC Seal Present/Intact: NP N
 COC Signed/Accurate: N N
 Bottles arrive intact: N N
 Correct bottles used: N N
 Sufficient volume sent: N N
 If Applicable
 VOA Zero Headspace: N N
 Preservation Correct/Checked: N N

Relinquished by: (Signature)
Regan Byrd (PPM)

Date: **10/11/18**
Time: **16:00**

Received by: (Signature)
FedEx 41624 2995 2917

Trip Blank Received: No
 HCL/MeOH
 TBR

Relinquished by: (Signature)

Date: _____ Time: _____

Received by: (Signature)

Temp: **3.5 AT** °C
 Bottles Received: **100+4TB**

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date: _____ Time: _____

Received for lab by: (Signature)
Regan Byrd

Date: **10/12/18** Time: **8:45**

Hold: _____ Condition: **NCF 10X**

PPM Consultants - MS
 289 Commerce Park Drive, Suite D
 Ridgeland, MS 39157

Billing Information:
Accounts Payable
 289 Commerce Park Drive, Suite D
 Ridgeland, MS 39157

Report to:
Mr. Beau Hale

Email To: beau.hale@ppmco.com
 regan.byrd@ppmco.com

Project Description: **Teters Floral Property**
 City/State Collected: **Louisville MS**

Chain of Custody Page 5 of 6



12065 Lebanon Rd
 Mount Juliet, TN 37122
 Phone: 615-758-5858
 Phone: 800-767-5859
 Fax: 615-758-5859



Phone: **601-956-8233**
 Fax: **601-720-0747**

Client Project # **30045901-TO 15**
 Lab Project # **PPMCONMS-HALE**

Collected by (print): **Regan Byrd**
 Collected by (signature): *Regan Byrd*

Site/Facility ID #
 P.O. #
 Quote #

Rush? (Lab MUST Be Notified)
 Same Day Five Day
 Next Day 5 Day (Rad Only)
 Two Day 10 Day (Rad Only)
 Three Day

Immediately Packed on Ice N Y

Date Results Needed

No. of Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	SVOCS 4ozClr-NoPres	V8260 40mlAmb-HCl	V8260 40mlAmb/MeOH5ml/Syr	V8260BTEX 40mlAmb-HCl	V8260BTEX 40mlAmb/MeOH5ml/Syr	VOC SCREEN 2ozClr-NoPres
✓ EQUIP RINSE S	Grab	GW		10/8/18	16:40	3		X				
✓ EQUIP RINSE GW	Grab	GW		10/11/18	8:56	3		X				
✓ FIELD BLANK 1	Grab	GW		10/11/18	8:56	3		X				
✓ FIELD BLANK 2	Grab	GW		10/10/18	15:23	3		X				
✓ FIELD BLANK 3	Grab	GW		10/8/18	15:20	3		X				
FIELD BLANK 4	Grab	GW				3		X				
✓ FIELD BLANK 5	Grab	GW		10/9/18	10:45	3		X				
✓ Trip Blank 1	Lab	GW		10/8/18	0:00	12		Y				
✓ Trip Blank 2	Lab	GW		10/8/18	0:00	12		X				

* Matrix: SS - Soil AIR - Air F - Filter
 GW - Groundwater B - Bioassay
 WW - WasteWater
 DW - Drinking Water
 OT - Other

Remarks:

Samples returned via: UPS FedEx Courier

Tracking #

pH _____ Temp _____
 Flow _____ Other _____

Sample Receipt Checklist

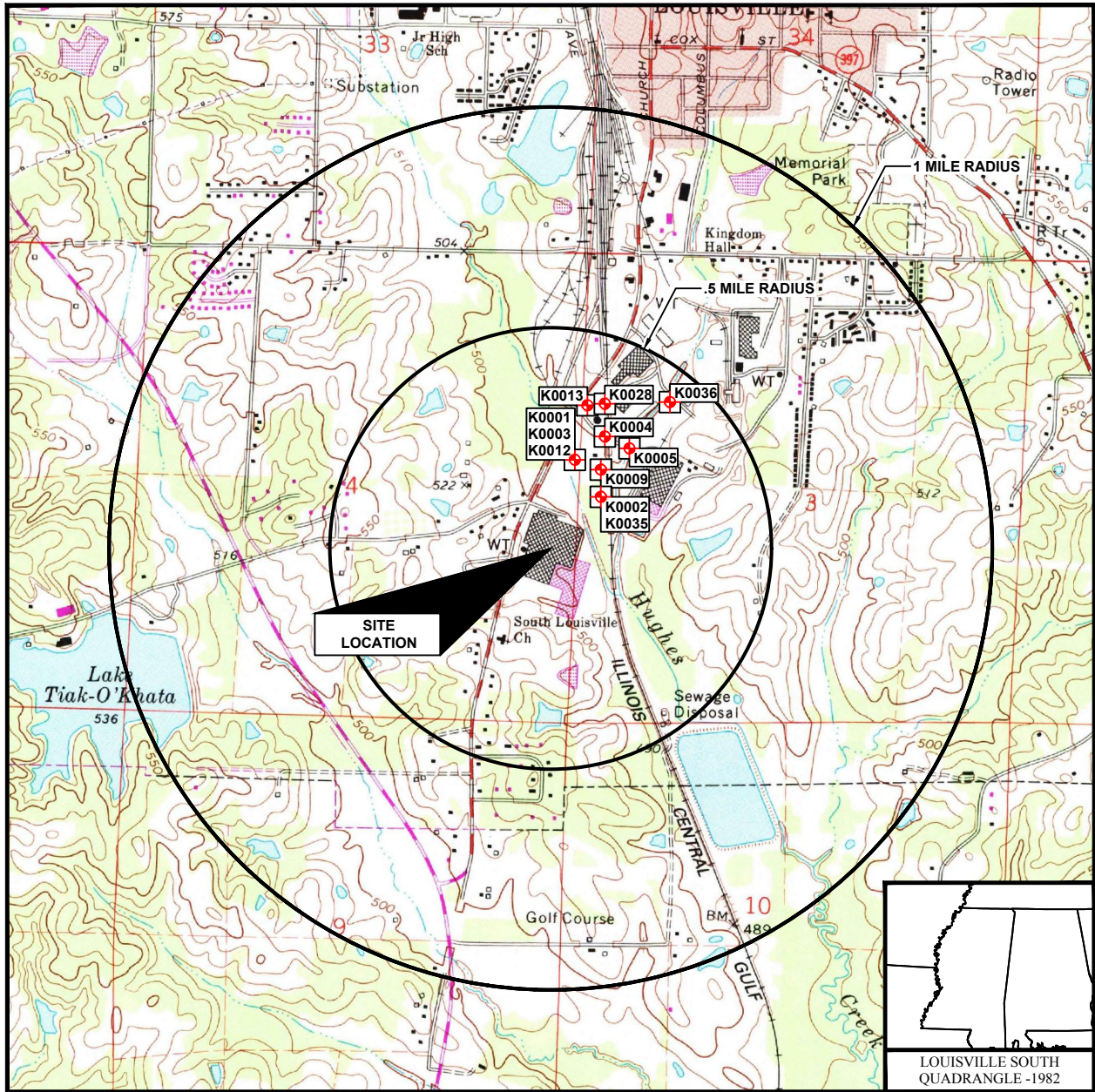
COC Seal Present/Intact:	NP	Y	N
COC Signed/Accurate:		X	N
Bottles arrive intact:		X	N
Correct bottles used:		X	N
Sufficient volume sent:		X	N
If Applicable			
VOA Zero Headspace:		X	N
Preservation Correct/Checked:		X	N

Relinquished by: (Signature) <i>Regan Byrd (PPM)</i>	Date: 10/11/18	Time: 16:00	Received by: (Signature) <i>FedEx</i>	Trip Blank Received: Yes/No HCL/MeOH TBR 4
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 3.5°C Bottles Received: 100+4TB
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <i>Regan Byrd</i>	Date: 10/11/18 Time: 8:45

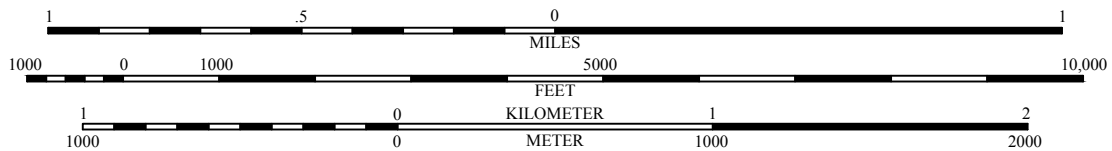
If preservation required by Login: Date/Time

Hold: Condition: NCF / OK

APPENDIX E – AREA WATER WELL INFORMATION




SCALE: 1 : 24,000



LEGEND:



WATER WELL LOCATION

 PPM CONSULTANTS, INC. www.ppmco.com	
DRAWN BY: JCP	DRAWN DATE: 11/12/18
PROJECT NUMBER: 30065901	BILLING GROUP: TO 15

**CITY OF LOUISVILLE
 TETERS FLORAL PROPERTY**
 912 SOUTH CHURCH STREET
 LOUISVILLE, MISSISSIPPI

**WATER WELL
 SURVEY MAP**

FIGURE
 NUMBER

9

11/13/18

Center point (Latitude, Longitude):330601, 890332

Radial search distance of: 1 miles

Permit #	Fipwell	Fips	Well	Latitude	Longitude	Sec	Twn	Rng	Depth	Use	Owner
MS-GW-13626	159K0013	159	K0013	330618	890327	03	14N	12E	360	AB	LOUISVILLE UTILITY
MS-GW-13627	159K0003	159	K0003	330611	890328	03	14N	12E	356	PS	LOUISVILLE UTILITY
MS-GW-13628	159K0009	159	K0009	330610	890325	03	14N	12E	316	PS	LOUISVILLE UTILITY
MS-GW-13629	159K0004	159	K0004	330614	890325	03	14N	12E	314	PS	LOUISVILLE UTILITY
MS-GW-13630	159K0028	159	K0028	330618	890325	03	14N	12E	316	PS	LOUISVILLE UTILITY
MS-GW-14932	159K0035	159	K0035	330607	890325	03	14N	12E	310	PS	LOUISVILLE UTILITY
	159K0012	159	K0012	330611	890328	03	14N	12E	2725	UN	LOUISVILLE UTILITY
	159K0001	159	K0001	330611	890330	04	14N	12E	314	UN	LOUISVILLE UTILITY
	159K0002	159	K0002	330606	890324	03	14N	12E	356	AB	LOUISVILLE UTILITY
	159K0005	159	K0005	330613	890321	03	14N	12E	306	UN	GEORGIA PACIFIC LLC
	159K0036	159	K0036	330618	890316	03	14N	12E	310	OT	GEORGIA PACIFIC CORPORATION